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HIDDEN TREASURES,

Fisheries Around the North-West Coast.

"The taking of fish on the banks is a momentous concern."—
FRANK ARIZ.

IN ONE VOLUME.

BY J. L. McDONALD,

OF WASHINGTON TERRITORY.

FRUCTER BROTHERS, PRINTERS,
ADVERTISING OFFICE, CLOUGHSTON, ILL.

1871.

'Hidden Treasures, or Fisheries Around the Northwest Coast.'

BY J. L. McDONALD, OF WASHINGTON TERRITORY.

OPINIONS OF THE PRESS AND INDIVIDUALS:

[From the Boston Daily Advertiser.]

MR. J. L. McDONALD of Washington Territory, is the author of a pamphlet of 116 pages, printed by Procter Brothers of Gloucester, who have it for sale, entitled *Hidden Treasures, or Fisheries Around the Northwest Coast*. Mr. McDonald has an intimate knowledge of his own country, and the northwestern possessions, including Alaska, and in this work he has reinforced it by the testimony of Professor Davidson, of the Pacific coast survey, Generals Davis and Thomas, and many others who have visited the region. He believes Alaska to be an acquisition of great value to this country, and sure to become a source of commercial profit. The purpose of this essay is primarily to awaken an interest in the fisheries of the northwestern coast and to advocate the wisdom of Congressional legislation that will foster their development. Incidentally he has given a large amount of information respecting the geography, natural advantages, products and possibilities of the almost unexplored regions of which he treats.

[From the Cape Ann Advertiser.]

HIDDEN TREASURES, or Fisheries Around the Northwest Coast, by Capt. J. L. McDonald of Washington Territory. Procter Brothers, Publishers, Gloucester, Mass. This is a pamphlet volume of 116 pages, and the author, who is thoroughly a practical man, presents a vast fund of information relative to this important fishing interest. This information is rendered the more valuable from the fact that the author knows what he converses of from actual observation. It is written in a very pleasing style, and the facts presented in regard to climate, population, scenery, navigation, business importance, the fisheries, etc., are of interest to every American citizen. We bespeak for this volume a large sale, as it meets a want which it very fully supplies.

[From the Provincetown Advertiser.]

HIDDEN TREASURES, or Fisheries Around the Northwest Coast, by J. L. McDonald. We have carefully examined this pamphlet, written by one who for twenty-three years was a resident of Truro, and for the last thirteen of Washington Territory. The book is replete with interesting facts, and much valuable information upon the region which is its theme. All should possess it. Mr. McDonald intends delivering a lecture upon the Treasury of the Northwest in this place. We predict an interesting discourse and a full house.

Mr. J. L. McDonald, delivered a lecture upon Alaska, to an appreciative audience, at Masonic Hall, Saturday evening. He painted the fishing business of that new region in glowing colors and predicts for it a bright future. He describes the salmon and other valuable fish as being found in schools in the waters of that country; seals, walrus, whales, etc., in vast numbers. It must be "the happy hunting grounds" of the fisherman.

[From the Plymouth Sentinel.]

FISHERIES.—Mr. J. L. McDonald, of Washington Territory, has written an interesting essay on the fisheries around the northwest coast, which is printed in pamphlet form. The work, though local in its primary object, has many thoughtful suggestions upon the general subject of fisheries, and the need of friendly legislation in their aid in the present emergency. It is encouraging in that it will be more likely to enlist the sympathies of western members of Congress, than suggestions in behalf of the New England interests, about which they have always manifested more or less jealousy. The author of the essay is a delegate from the Pacific coast, to represent the fishery interests of that section, and seems familiar with the subject, and an enthusiast in its behalf.

AUBURN, November 15th, 1871.

My Dear Sir:—You can scarcely conceive how great a favor you have done me in sending me your book about the Northwest Fisheries. . . . The construction of the North Pacific Railroad will, amongst other great results, hasten the cultivation of the great waterfield which you have so well explored.

Very sincerely your obdt servt,

W. H. SEWARD.

J. L. McDONALD, Esq., Boston.

BOSTON HIGHLANDS, Jan. 26th, 1872.

J. L. McDONALD, Esq.,

I thank you for a copy of the "Hidden Treasures, or Fisheries around the Northwest Coast." It has interested and instructed me. . . . I am bound to say that the desire to give exact and useful information to your readers, and to promote the interest of our country, are manifest throughout. That your efforts in behalf of the public will be crowned with complete success, and that you will meet adequate personal reward, I most sincerely hope. . . . As concerns the section of country known as "Foggy Sound," I have long been of the opinion that it is one of the most desirable in this whole hemisphere for young men ambitious of personal distinction and of advancing the public weal. Allow me again to thank you and to wish you success.

Very truly, your friend and servant,

LORENZO SAMPIN.

Main Central Railroad Company, President's Office,
AUGUSTA, May 26th, 1872.

The bearer, J. L. McDonald, is the author of a work entitled "Hidden Treasures, or Fisheries Around the Northwest Coast." In this book of some hundred pages, he has given a valuable treatise on the great fishing interests of our northwest coast, and illustrated by many pertinent facts showing the immense value of these "hidden treasures" to the people of the United States. The book also contains many other facts relative to the northwest coast, of great interest.

H. D. RICE, (Vice Pres. N. P. Railroad Company.)

Mon. Lorenzo Sabine,
with regards of - L. L. McDonald,
Presk. Territory.

[Entered according to Act of Congress, with the Librarian of Congress, 1870.]

ACQUISITION OF CALIFORNIA.

In 1846 the Mexican Province of California was annexed to the United States, and many people emigrated across the plains to that genial section of our country. Shortly afterward gold was discovered in various parts of that land in considerable quantities, and of such fineness as to attract ambitious men from other countries in search of sudden wealth; in developing the gold fields the mountains have been washed, the hills dug up, and ancient rivers have been diverted from their time-worn channels.

"Gold — many hunted, sweat and bled for gold,
And on its altar sacrificed ease, peace,
Truth, faith, integrity, good conscience, friends,
Love, charity, benevolence, and all
The sweet and tender sympathies of life;
Most for the luxuries it bought — the pomp,
The praise, the glitter, fashion and renown,
This yellow phantom followed and adored."

— Pollock.

Who can paint the hardships and privations which the miners endured? How many bright visions came to untimely grief in that prolific land of the sham-rock? How many devoted mothers and neglected wives have offered up their most earnest prayers to God in behalf of their cherished ones struggling and toiling in the sunset land?

The north-west coast presents varied landscapes, bold, bleak headlands, broad tablelands, green valleys and sandy beaches, with occasional rocky reefs and ledges. The entire coast line has been explored; the sounds, bays, roadsteads and harbors have been minutely surveyed.

Islands of different forms and elevations fringe several sections of the coast, all of which may be seen in clear weather for

many miles; generally these islands present abrupt, clear shores, and may be approached with safety. The islands in the Santa Barbara channel afford good anchorage; fuel, water and provisions are obtainable.

The Farralones, a group of high, sterile rocks, bearing S. W. nearly twenty-five miles from the Golden Gate. During the spring months millions of birds are seen hovering around these islets; many eggs are annually gathered there. Fierce conflicts and even bloodshed have been perpetrated for the periodical egg crop; the strong arm of power has finally quieted the sanguinary broils, the title to these islands has been adjudicated, and "peace reigns again in Warsaw."

Tatooah is the most northerly island on the "old north-west coast," is flat-topped, without trees or shrubbery, its sides are nearly perpendicular, soaring 100 feet above the sea.

The temperature of the North Pacific ocean ranges from 52° to 54°, much colder than the Atlantic on corresponding parallels. A stream of warmer water washes the shores of Santa Barbara; the people residing along these shores appreciate this boon, and may be seen on summer evenings in crowds enjoying the cheap luxury of sea bathing — a luxury generally denied the less favored people settled along the more northern coast.

Winds. For nine months in each year, from March to November, the wind blows regularly from the north-west along the coast with the regularity of trade winds. In February this sea breeze comes in during afternoon and continues till midnight; during May, June and July this wind is strong, and declines with the sun; in August and September it blows with certainty; in October it fans weaker, and seldom extends beyond the 50°. During the prevalence of these winds the weather is temperate and bracing; heavy gales are not common on our coast. "From April to October, inclusive, the prevailing wind is from the north-west, changing to west in valleys opening upon the coast, but in no case so strongly as through the Golden Gate. During the summer the wind sets in strong about 10, A. M., increasing until nearly sunset when it begins to die away." — Davidson.

From October till January the wind prevails generally from the westward; on approaching the coast and striking against the coast range of mountains it deflects to the north-west and blows parallel to the shore. This wind comes with much force

especially in the month of December, afflicting our shipping with more or less damage. Heavy gales from the southward very often veer suddenly to the north and blow with great violence. "From November to March the wind is frequently from the south-east, blowing heavily, working round to the south-west with a large and broken swell from that quarter, weather thick, rainy and squally, the wind not unfrequently ending at north-west, with an ugly cross sea."—*Davidson*.

Rain-fall varies in different localities. To the south of Monterey droughts are prevalent, causing in some years the death of many cattle; to the north of the Golden Gate rain falls in sufficient quantities for husbandry; in the region watered by the lower Columbia river the "Oregon mist" falls thick and fast, whilst along Puget Sound valley sufficient rain falls for the general purposes of life. Rains along this coast are greeted with joy, as they not only stimulate vegetation but also purify the atmosphere and impart health and vigor to the sick and disconsolate. Tempests are seldom experienced; during our sojourn on the coast for nearly twelve years we observed but one thunder-storm, and that was a mild one compared with those witnessed in the north Atlantic. Fogs are prevalent especially in the calm regions around the Golden Gate, and are very dense, retarding navigation. "During the summer the wind sets in strong about 10, A. M., increasing until nearly sunset when it begins to die away. During its height it almost regularly brings in a dense fog, which, working its way over the peninsula, meets that already advanced through the Golden Gate, and envelopes San Francisco and the bay by sunset. As a rule the breeze does not dispel the fog. If fog exists outside, the wind is sure to bring it in."—*Davidson*.

As we progress farther north the fog is lighter and of short duration; off the bar of the Columbia it offers little obstruction to shipping. On approaching the Strait of Fuca the soundings are gradual and the entrance wide, and little heed is paid there to fogs, snowstorms, or darkness.

Fish. The coast extending from San Diego on the south, to Cape Flattery on the north, is very destitute of fish. The Spanish pioneers on the Pacific slope were early impressed with this conviction, and obtained a special dispensation from Rome, whereby they were relieved from the usual observance of stated days and seasons, and were at liberty to subsist on meats on all

occasions, as no fish were to be had. The warm stream bathing the shores of Santa Barbara, (already noted), affords genial resort to various species of fish, which, like all fish found in warm water, are lean and poor and of little value to the practical fisherman.

Sea Bass of various kinds are found around these islands in limited numbers; they range from twelve to twenty inches in length, speckled on the back, plump and solid; when fresh they afford palatable food, when salted they become dry and tough. The Tantog family are found in considerable numbers, they are coarse-grained and tasteless. Barracouta are plenty, ranging from twenty to thirty inches in length, spare, lean and dry; this fish is very savage, and annoy the fishermen, often carrying off their gear.

In the summer season mackerel are found in the channel; they congregate in considerable numbers, and range from ten to twelve inches in length, lean, poor and slimy; they bear some resemblance to the "Dollar mackerel" on the eastern coast, and when salted are hard and tough. In the season of 1859 the writer caught 246 barrels of poor mackerel in Prisoner's Cove, on the north-east side of Santa Cruz island. Opposite the old mission of Santa Barbara we encountered large bodies at times. They appeared to gravitate to the westward, but we have not been able to trace them to any higher latitudes. They are annually taken along the coast of California, but not in sufficient numbers to justify any great preparation. The scarcity of fat mackerel along the north-west coast is a fatal drawback to our commercial development. The lean clipper with symmetrical lines, the trim and rig of the vessel, the cut and set of the sails, the emulation among the crew to excel over each other, the small steering, the graceful walk on deck, the fierce determination to be high line, the keen manœuvring at the rail, the dignified demeanor in the boat, and all the graces clustering around that invigorating industry, and the lively ambition which it kindles in the youthful breast, renders the mackerel fishing schooner the most inspiring nursery for practical seamanship; the want of this animating school is deeply deplored, and operates to retard the buikling of fast vessels on our coast.

Sea Bass are found in the vicinity of the Golden Gate. Some of them are very large; they are savage, and annoying

to the sporting fraternity; thrilling conflicts with this monster are recorded. The fishermen capture them in considerable numbers; they command high prices and are held in high esteem among the epicures in San Francisco.

Cod are taken in very limited numbers off the Farralones, they are lean and very poor, and resemble the jaundiced cod on the grand bank. On the Heceta bank, N.N.W. from Cape Orford, Oregon, cod are found. The Indians residing on that coast report this fish as quite abundant in the summer months, and are said to be large, solid and delicious. During the winter season shoals of cod are found in Puget Sound, they are small, resembling the Labrador cod, solid and sweet. The Indians take considerable quantities in seines; when salted and properly cured this fish commands a premium over all other cod in the market of San Francisco.

Hallbut are found on Cape Flattery in certain seasons, they are small and sweet; the Indians take them in numbers for food.

BANK OF CAPE FLATTERY. — "At the entrance to the Strait of Juan de Fuca, fifteen miles by estimation W.N.W. from Cape Flattery, it is reported that a bank exists having eighteen fathoms upon it. The Indians frequently go out upon some bank off the strait to fish for cod each season. In July, 1865, the schooner 'Brant' of Victoria, discovered codfishing banks off Cape Flattery, and caught five barrels of cod after two hours' fishing. The fish are known as red cod, and weigh from five to fifteen pounds each. The bank has soundings in twenty-five fathoms, and is sixteen miles nearly due west from Cape Flattery. . . . This is an Indian fishing ground. Canoes go out on the ebb current, catch an average of fifty fish of forty pounds weight each, and return with flood current and westerly wind." — Davidson.

Dogfish are abundant in the waters of Puget Sound. This fish is large and solid, and yield plump, healthy livers, rich in oil. The great rise and fall of the ocean tide in these regions enable fishermen to trap large numbers of this fish in wiers. Dogfish oil is held in high esteem by our lumbermen, and sells rapidly for sixty to seventy cents, in coin, per gallon.

Salmon are found along the north-west coast in countless numbers. Early in April they enter the Sacramento river and are taken in seines; they are large, and are packed in ice and sent to the eastern markets. This fish, though very large, is

not a fair specimen of our northern salmon, as it is much softer. The "Chinook salmon," found in the lower Columbia, are very large, solid and fat. Several establishments are located along the banks of this river devoted to the catching and pickling of this fine fish. We noticed two or three fishing stations on the Washington side of the river in which salmon were prepared and put up in tin cans, hermetically sealed. The salmon fishery on the Columbia is profitably developed. Several varieties of salmon are taken around the shores of Washington territory, and a number of rivers emptying into the Pacific ocean teem with this fish. During ten years voyaging on Puget Sound we observed the annual advent of silver salmon into those waters. This species ranges from eighteen to twenty-four inches in length, and present a white, shining appearance, solid and very fat, and when properly dressed and pickled, command remunerative prices. They take the hook, and are thus taken in great numbers by the Indians, with whom it forms the principal staff of life. Several white people have engaged in developing this branch of industry. We have good faith in the enterprise and earnestly recommend it to the most favorable attention of energetic fishermen.

British Columbia, its romantic coast and lucrative fisheries, deserve notice. The fishing resources of this colony being opened to Americans by the "Treaty of Washington," we cheerfully present the visible treasures latent in those waters, in the fond hope that that domain will ere many years shall roll around, become a part of our own great Republic. This appendage of the British Empire is already "sandwiched in between the territories of Washington and Alaska." Its coast presents varied landscape, craggy mountains, bleak headlands, green valleys and clear, pebbly beaches; in romantic scenery and beautiful views this colony may safely challenge any other portion of God's green earth. In June, 1862, we sailed along this coast in a small sloop for hundreds of miles through the interior chain of islands extending from Olympia, at the head of Puget Sound, to the Stikine river—the south boundary of Alaska. We traverse the very region of romance, high cliffs overhanging deep shewn waters, frequent bays, meandering shores fringed with dense forests—every tree more stately than the "Cedars of Lebanon." Of this labyrinth of waters Prof. Davidson remarks: "From the head of Puget Sound, in lat. 47° 05, to the

mouth of the Chilkah, in $59^{\circ} 15'$, through seven hundred and thirty-two miles, lies the vast interior line of navigation, unequalled in the world for bold shores, deep waters, numerous bays and harbors, bordered every mile with timber of great size and height. The smallest craft can make their trading trips through these waters without the risk of a sea voyage; small steamboats can traverse them and find fuel at every point of the twenty thousand miles of shore line. The frequency of passages connecting these great straits and sounds with the ocean render them of inestimable value as a means of refuge to vessels fearing or suffering from heavy weather at sea. . . . These waters were discovered by the American vessel 'Washington,' which entered by the Strait of Fuca in $48^{\circ} 24'$, and left them by Dixon Sound in $54^{\circ} 40'$."

Several islands margin this coast, prominent among which Vancouver looms 7000 feet above the sea. This important island runs parallel with the main land for nearly 200 miles, and presents bold, abrupt outlines and acceptable anchorage. Farther north Queen Charlotte islands run parallel with the coast for 160 miles; this group soars high and presents wild, craggy outlines, deep ravines, dense with timber; the shores are bold and clean, affording secure shelter, where fuel, water and game may be obtained. Numerous tribes of Indians inhabit this coast. Some of them have acquired the rudiments of education, and display considerable mechanical ingenuity, the graceful models and lines of their canoes indicating artistic taste. They are expert watermen and skilful fishermen, navigating these waters in all seasons with safety, and capturing many whales; they are treacherous and cruel to the white traders, and have plundered several vessels and murdered their crews. The gunboats of the royal navy exert a wholesome terror over the Indians in these regions.

Fish. All the varieties of fish found in Puget Sound are also taken in the waters bathing British Columbia; sardines, smelts and herring are abundant, dogfish are plenty and solid, yielding clear, rich oil, the Indians take millions of them annually. Cod of various species are found close to the shore and may be taken in quantities. Halibut are found around the Queen Charlotte isles like those taken off Cape Flattery, they are too small for the general purposes of commerce. Salmon revel around this coast; those found around the islands are of

moderate size, resembling the silver salmon in Puget Sound. In the Fraser, Sticknine and other rivers on the main-land, very large salmon are found in shoals. "Fish and other game, salmon and other good fish abound at the mouth of the Sticknine. When the salmon ascend the river in June and July, the Indians follow and catch them in great numbers. They split them along the back removing the back-bone, cut them in long strips, and dry and smoke them; when well cured they are very fine and convenient in camp." — Davidson.

Acquisition of Alaska. From what has been demonstrated in the foregoing pages touching the supply of cod and mackerel along the north-west coast, the impoverished fishing grounds and the sterility of our commercial nursery appeared rather dreary. The author having devoted several years to the fishing industry in British America and New England, and appreciating the lively impulse that that industrial school imparted to the colonial commerce, directed our earnest attention to this prolific business on the north-west coast. In the season of 1859, (as before stated), we made a voyage to the southern coast in search of mackerel which we found in shoals in the warm waters of Santa Barbara channel, but of such poor quality as not to justify any extensive preparation or profit.

In the winter of 1859-60, the governor of Russian America visited San Francisco and tarried there for weeks. The writer obtained an audience with him through the friendship of the Russian Consul, and earnestly solicited of him the *privilege* of prosecuting the salt fisheries for a term of years on the peninsula of Alaska. The consul was a partner in our enterprise, and he urged our claims most earnestly; for days and weeks we lavished every conceivable blandishment on the imperial nabob to secure the desired franchise. He very coolly refused to comply with our requests, and with an emphatic "No!" politely withdrew his august presence, and thus our first attempt on Alaska "died of a rose in aromatic pain," and the enterprise was abandoned with sore regrets. In our perplexity we addressed Secretary Cass at Washington, imploring governmental assistance to the end that we might obtain a foothold near the fishing grounds margining Russian America. The venerable secretary replied that the troubles then in prospect in the South precluded any effort on the part of the Federal government in our behalf, and that our franchise in those regions must wait for a more

convenient season." Senator Gwinn from California was also strongly appealed to to advocate this measure conjointly with Secretary Cass; to his credit be it written that then and there he offered the government of Russia the sum of \$6,000,000 for the territory of Alaska. [See Hon. Charles Sumner's speech on the cession of Alaska.]

The great rebellion in the Southern States paralyzed our national industry, on the Pacific slope we felt its baneful influence in obstructing many enterprises. At the restoration of peace our people branched out into new channels of industry and general prosperity prevailed. Whaling vessels visiting Behring Sea and the Arctic Ocean took cod in more or less quantities, and the abundance of those and other desirable fish in the waters bathing the Russian possessions became known to our people, and some of our adventurous fishermen made occasional raids on those fishing grounds and in a few weeks returned laden with the products of those waters.

In the spring of 1866 Captain Turner sailed from San Francisco in the schr. "Porpoise;" he pursued a northerly course, calling at Queen Charlotte's, Unga, and Shumagin islands; around the latter named group he found safe harbors, fuel, water and other facilities for prosecuting his business, while on the grounds fringing those isles he found large, plump, healthy codfish in such numbers as to enable him to fill his vessel in a few weeks. After an absence of three months this "hardy toiler on the sea" returned to the "Bay City," having performed a successful porpoise voyage, the honored pioneer of the north-western salt fisheries.

In January, 1866,* the author, while attending the session of the legislature at Olympia, the capital of Washington Territory, determined to make another bold push for Alaska, by soliciting the good offices of our government for the purpose of obtaining a permanent foothold, and to open the prolific fishing grounds in those regions to our ambitious fishermen. To this end we penned the following:

"Memorial. To His Excellency Andrew Johnson, President of the United States. Your memorialists—the Legislative Assembly of Washington Territory, beg leave to show that vast quantities of cod, halibut and salmon of excellent quality, are found along the shores of Russian America. Your memorialists respectfully request your Excellency to obtain such rights and

privileges of the government of Russia, as will enable our fishing vessels to visit the harbors of its possessions, to the end that fuel, water and provisions may be obtained; that our sick and disabled fishermen may obtain sanitary assistance; together with the privilege of taking and curing fish and repairing vessels in need of repairs. Your memorialists further request that the Secretary of the Treasury be instructed to forward to the Collector of Customs of this, Puget Sound district, such fishing license, abstract journals and log-books, as will enable our hardy fishermen to obtain the bounties now paid to the fishermen in the Atlantic States. Your memorialists finally pray your Excellency to employ such ships as may be spared from the Pacific naval fleet in surveying the fishing banks known to navigators to exist from the Cortex Bank to Behring Strait."

This memorial, written by a fisherman in behalf of the fishing industry on the north-east coast, passed both branches of our territorial legislature with commendable unanimity and dispatch. In forwarding a copy of the above named memorial to the Secretary of State, we imparted such information touching the fisheries around the Russian possessions, and the impulse which the opening of those resources to our fishermen would impart to the commercial development on the north-west coast. In acknowledging our humble services the illustrious secretary assured us that "in consummating the recent purchase, I was strongly fortified by the letters which you wrote to me touching the valuable fisheries in those waters." The New York Times of April 1st, 1867, (the acknowledged organ of Secretary Seward,) said, "that a memorial from the Territorial Legislature of Washington Territory, dated January, 1866, asking the President to obtain certain rights for the fishermen, was the foundation of the present treaty."

On the eighteenth of October, 1867, the transfer of this vast territory from Russia to the United States was officially consummated by the respective commissioners of the two governments, at Sitka, in the presence of the Russian population, who cheerfully welcomed the few Americans there also present. The union has been very cheerfully accepted by the people of the territory. Our government, on assuming possession, found numerous adventurers from the Pacific States domiciled in various parts of the territory engaged in trade and in developing the resources in those regions; vessels laden with ware entered

every harbor, stores were opened as by magic in every acceptable roadstead along the southern and western coasts, an active competition for furs, oil, ivory, old copper, iron and junk, was earnestly inaugurated, commerce revived, the sails of our vessels whitened every creek, bay and sound, and the staid Russians very soon obtained an insight into Yankee progress on the go-ahead principle.

Topography. The topography of this coast presents varied scenery; rugged mountains, craggy promontories, bleak headlands and broad valleys. The shores are generally bold and clean, offering little obstruction to careful navigation. Mount St. Elias, in the south-eastern angle of the territory, soars high in the region of clouds; the highest elevation in our country may be seen on a clear day 130 miles at sea. Cape Douglas, the south-west angle of Cook's Inlet, forms a lofty cupola which gradually slopes with gentle declivity along the peninsula of Alaska, and terminates in a low plateau. Several mountains run parallel with the coast and rear their lofty crests heavenward. On a clear day these mountain domes, basking in eternal aëst, glittering in the sun's rays and cutting sharp against the azure sky, present the grandest scenery the human eye can witness; we have observed these sparkling monuments from the vessel, many leagues off shore,—the landscape was romantic and wild.

Behring Sea is margined with lower table lands, the shore meanders into bays and coves; the Yukon river empties into this sea through various channels, depositing vast quantities of sediment which form broad marshes along the coast for leagues, and extend for miles into the sea. "The whole country, from Norton's Sound to Point Barrow, is a vast moorland, . . .

The aspect of some spots is very gay; May-flowers are large, with bright colors, though white predominates, and plants displaying other tints are not uncommon. Cape Lisburn, in lat. $68^{\circ} 52'$, one of the most productive localities, looks like a garden. To prevent the ravages of the scurvy, the Esquimaux collect for their stock, raspberries, whortleberries and cranberries.

. . . In the Arctic sub-regions there are plants which the eye is accustomed to meet in the plains of more temperate climates, besides annuals and bi-annuals, shrubs and trees. A peculiar feature of the vegetation is its hairless character, the poisonous plants being few in number and their quality by no means virulent."—*Davidson*.

Islands of various forms and elevation border the coast; the Kadik group present high, craggy cliffs and verdant gulches, with broad, green valleys; the Shumagins are lower, more level, and back in nutritious grass. The small islands margining the peninsula are numerous and barren, presenting clean, pebbly beaches. The Aleutian Islands; extending from the southwestern angle of the territory in the direction of the Asiatic coast, are bold, rugged and mountainous. Several volcanic peaks are visible among these islands, they are separated by deep, boiling channels, through which the ocean currents rush with fierce violence, creating fearful tide-rips, which, in heavy gales, mariners in those waters are most careful to avoid.

Climate. Along the southern and western shores of Alaska the climate is humid and milder than could be looked for in such high latitudes, tempered by the volume of warm water constantly bathing those shores. This thermal stream from "India's coral strand," coming through the sea of Japan, along the Asiatic coast, and dividing into several branches, the greatest of which passes through Behring Strait into the Arctic Ocean, and carrying the ice formed in those waters away from our shores; a considerable stream shoots to the north-east, striking with some force against the island of St. Lawrence, again deflects to the eastward and finally to the southward and westward, laving the northern shores of the peninsula of Alaska and the Aleutian islands. A considerable volume of this current crosses on an easterly course, washing the south-eastern base of Alaska, strikes the shores of British Columbia, and deflects to the north-west and westward, creating a strong counter-current along the Gulf of Alaska and imparting a double dose of heat to the shores fringing those waters. The westerly winds blowing over this thermal plateau tempers the coast climate, and in passing through the Cascade Mountains are known as "Chinook winds" in the broad basin of the Columbia river. These winds thus tempered exert vital influence along the coast, stimulating vegetation and dense underbrush. The condensation of this warm wind by the colder air on the mainland produces moisture and heavy rains, hence the rank growth of trees, grasses, plants and moss. Larger trees are found here than on the Atlantic slope on the same parallels, while gay plants and beautiful flowers flourish and give to those regions the appearance of budding fields.

"The North Pacific presents a peculiar striking analogy to the North Atlantic, in the existence of a great warm current which sweeps along the eastern coast of Asia to the north-eastward across the Pacific, washes the north-west coast of America, affects the climate of the whole coast, and gives a much higher temperature along the sea-board than would exist under normal circumstances. The Japanese have long been well aware of this great current which washes the south-eastern shores of their empire, and have given to it the name of 'Kuro Siwo, or Black Stream,' from its deep blue color when compared with the neighboring waters of the Pacific. It has been noticed by nearly all the old navigators and explorers, and a systematic series of observations was undertaken by the United States expeditions to Japan under Commodore Perry. This singular current, with the water at an average maximum temperature of 86° , being that of the equatorial waters, affords a solution of the fact of the Bonin islands, in the lat. of $27\frac{1}{2}^{\circ}$, having an exclusively tropical vegetation, the cause of which was long a mystery to naturalists. It also accounts for the productiveness of the southern islands of the Japan group, in sugar and other products usually confined to inter-tropical regions, and to the successful development of the silk worm as high as lat. 45° .

The results of observations, corroborated by the facts of the high temperature above stated, shows very satisfactorily that the Japan stream has its origin in the great northern equatorial current. This great current, leaving the coast of Lower California and the Gulf of California, between the latitudes of 15° and 25° , sweeps across the whole Pacific, with its axis two or three degrees south of the Sandwich islands, and thence on the parallel of 15° , and coming gradually northward until it passes the position of the Ladrone islands in lat. 17° , long. 214° west, is gradually deflected north-east along the Asiatic coast, but apparently with decreased velocity. . . . At 120 leagues eastward of Formosa the monsoon current of the Caroline islands runs northward, and thence north-east, adding its waters to those of the great Japan current. The combined waters of the Caroline and equatorial streams are thrown against the island of Formosa in lat. 22° , long. 239° west, thence deflected to the northward and north-eastward, and on the parallel of 31° strikes the southern extremity of Japan and pass close along the north-eastern coast of Nippon. Of the south and east

point of Nippon, in lat. 35° , long. 220° west, the stream again begins to spread, and by the time it reaches lat. 38° , long. 210° , it has been divided or split in two by the intrusion of the cold polar current. The contact of the cold and warm waters give rise to the constant fogs that exist in this region. One branch of the stream, called the Kamschatka current, moves to the north-east, nearly parallel with the coast of Japan, the Kurile islands and the coast of Kamschatka, its axis passing just east of Copper Island, in lat. 55° , long. 191, and running directly for Behring Strait. The other and greater branch follows the parallel of 35° eastward, being deflected a degree or two toward the south, in long. 180° , by the impinging of the cold Behring sea current running southward through the Fox islands, but in long. 170° it regains its latitude, and finally reaches the lat. 45° to 50° , in about long. 148° , when it appears to again divide. The main body of the stream stretches directly toward the coast of America, is deflected to the southward and eastward, runs down the coast of Oregon and California, and finally sweeps back into the great northern equatorial current. The existence of this current is well demonstrated by the wrecks of Japanese junks on the coasts of Washington Territory and Oregon. Many years ago, upon the beach south of Point Adams, at the entrance of the Columbia river, there was cast away a Chinese junk with many hands and a cargo of beeswax. The ship was totally lost but the crew were saved. In support of this Indian tradition pieces of this wax, coated with sand and bleached nearly white, are occasionally thrown upon the beach after great storms. Formerly a great deal was found, but now it is rarely met with. In 1851 we saw many pieces of it.* In 1888 a Japanese junk was wrecked near Cape Flattery, of which account can be found in Belcher's narrative and in United States exploring expedition. . . . Among the tangible proofs of the origin and existence of the Kamschatka current are the following: In September, 1862, a Japanese vessel was wrecked on the island of Atou, she had been driven off the coast of Japan two or three months before with a crew of twelve men, of whom she lost nine before going ashore, and had thus drifted 1800 miles in this current, at an average velocity of over twenty miles per day. Among the floating bodies which the sea drives upon the shores of Copper Island, the true right camphor-wood,

*The writer saw several cakes of this wax at Nehalem beach, in April, 1888.

and another sort of wood, very white, soft and sweet-scented, are occasionally found. Kotzebue found Asiatic wood among the Aleuts of Unalaska." — *Davidson*.

Hon. Charles Sumner, in his speech on the cession of Alaska, in demonstrating the thermal current in those regions, asserted: "All this is now explained by certain known forces in nature; of these the most important is a thermal current in the Pacific corresponding to the gulf stream in the Atlantic; the latter, having its origin in the heated waters in the Gulf of Mexico, flows as a river through the ocean northward, encircling England, bathing, Norway and warming all within its influence. A similar stream in the Pacific, sometimes called the Japanese current, having its origin under the equator near the Phillipines and the Malaccas, amid no common heat, after washing the ancient empire of Japan, sweeps northward until forming two branches, one moves onward to Behring Strait, and the other bends eastward along the Aleutian islands, and thence southward along the coast of Sitka, Oregon and California."

Intelligent people remote from the regions here described, are prone to doubt and unwilling to acknowledge the superiority of our climate along the north-west coast. For the purpose of removing doubt on this very important subject we have quoted very fully from Messrs. Davidson and Sumner, in the fond hope and conscious faith that this important truth so indispensable to the development of the vast latent resources in those regions, may be fully understood and appreciated. With all due respect to the opinions of the above named gentlemen, or any other man, we maintain that the "Japanese thermal current" does not extend southward of Vancouver island. During our voyaging in those waters we have failed to notice any indication of such a current on the coasts of Oregon or California, and have never met a practical navigator on that coast advocating such a theory. It is a well established fact among the coasters that the climate along the coasts of California and Oregon is much colder and more frigid than that on Puget Sound and the waters washing the coast of British Columbia. A very strong current runs constantly to the northward along those states, otherwise the antiquated, slow lumber vessels beating up those shores against the stiff north-west trade winds prevailing in those regions, would make very long passages. We have witnessed trees and logs of redwood from the coast forests of California beached on the

sand-spits margining the Strait De Fuca. Nearly all the vessels stranded on the bar of the Columbia, and on the coasts adjacent, have drifted northwest; the cargoes and materials of those wrecks have invariably grounded on the coast of British Columbia; all the deckloads of lumber thrown off of vessels on this coast, have, in every instance, landed either on Queen Charlotte's island or on the neighboring mainland. From such circumstances we conclude that no current flows southward along the shores of Oregon and California. In the regions east of the Cascade mountains, in British Columbia and the eastern division of Washington Territory, strong indications of thermal influences are manifest, which fortifies the belief that the thermal winds from the Indies are absorbed in the great basin of the Columbia, and that those warm breezes exert a directing power in tempering the climate, even in the northern pass of the Rocky mountains. The Cariboo gold fields are secluded in mountain fastnesses. In the winter season the climate is severe, the frost is very keen; miners who have wintered in those fields affirm that in traveling southward sixty miles they enter a genial thermal climate. The warm winds rushing in through the mountain pass from the ocean exert a powerful effect in those regions, quickening vegetation, spurring the grass and exciting plants and flowers. The "Hudson Bay Company" have, for nearly half a century, maintained large tracts of prairie lands in the Kamalloops, where they have nurtured and reared herds of cattle and horses. This "green spot in memory's waste" has proved a successful pasture; while vast herds in Oregon and California perished from the inclemency of the climate. Stock grazing on those bleak prairies, in lat. 52°, thrived and fattened. Notwithstanding that the company have never provided sheds or provender, we have yet to learn that any considerable number of their cattle perished in any season from hunger or cold. "In the economy of nature these thermal currents are only pipes of hot water, modifying the climate of continents by carrying heat from the warm cisterns of the south into the most distant places in the north. . . . Every ocean wind from every quarter, as it traverses over the stream of heat, takes up the warmth and carries it to the coast, so that the ocean current is re-enforced by an aerial current of constant influence. But these forces are aided by the configuration of the northwestern coast with a lofty and impenetrable barricade of mountains by which its islands

and harbors are protected from the cold of the north. Occupying the Aluetian islands, traversing the peninsula of Alaska, and running along the margin of the ocean to lat. $54^{\circ} 40'$, this mountain ridge, this climatic shed, such as perhaps exists nowhere else in the world; here an Alps, some of them volcanic, with Mount St. Elias, higher than Mount Blanc, standing guard against the Arctic Circle; so it serves without the aid of science. Here is a dike between the icy waters of Behring sea and the milder southern ocean; here is a partition between the treeless northern coast of the Keenians and Kolochians; here is a fence which separates the animal kingdom of this region, leaving on the one side the walrus and ice fox from the frozen ocean, and on the other side the humming bird from the tropics. I simply repeat the statements of geography. And now you will not fail to observe how by this configuration the thermal currents of the ocean are left to exercise their climatic powers."—*Sumner*.

Sitka, the famous metropolis of the Russian Fur Company, has been shorn of its prestige; it is still the "seat of customs," and the official headquarters of the army. Being located in the southeastern pan-handle of the territory, in the neighborhood of Fort Simpson, the Hudson Bay Company's nearest trading post, and surrounded by the most treacherous Indians on the northwest coast, who have inherited a deadly animosity against the "Bostonians," they carry their furs and products to Fort Simpson and trade them with the "King George men." In consequence of mutual hatred engendered between the races, little trade is now done at Sitka; "the glory of Israel is departed." Our fishermen and traders make a "bee line" to western Alaska, where they find kind, christian people of reliable, docile habits; very industrious trappers and fishermen, with whom a profitable barter in oil, furs, ivory and fish is largely and profitably carried on. The climate prevailing in the Sitka district changes but little in the course of a year; being fenced in by a chain of high mountains, an unusual amount of rain falls continually. "By this it will be seen that the mean temperature of Sitka in lat. $57^{\circ} 3'$, derived from twelve years observation, is $42^{\circ} 9'$, Fahrenheit. . . . The average amount of rain, melted snow and hail that fell from 1847 to 1864 (with the exception of the year 1855) was 82.66 inches, or within a fraction of seven feet, (yet five inches less than the fall at the mouth of the Columbia river,) and the average annual number of days upon which rain, snow

or hail fell, or heavy fogs prevailed, was 245, or two days out of every three. . . . Kotzebue says that in the middle of winter the cold is not excessive and never lasts long."—*Davidson*.

Kadiak and the islands adjacent are high and craggy, and subject to heavy rains. In summer the days are sunny and warm and the winter is much colder than at Sitka. We noticed green, nutritious grass, on which small compressed cattle were feeding; we also observed cabbages, carrots, potatoes and other vegetables growing in the neighborhood of St. Paul. "We were unable to obtain any meteorological records at St. Paul, and our knowledge of it is extremely limited. In general terms we know that it is warmer in summer than at Sitka, and colder in winter, and this is corroborated by the fact that ice obtained at Sitka for the San Francisco market has been found unfit for commerce on account of being full of air holes, by which it rapidly melted, and recourse was had to the ice formed by the colder winters of Kadiak. . . . In the latter part of August we found grass growing from the sphagnum and having an average height of not less than two feet. It is usually cut about the first of August, and cures well and rapidly in a few days; some stalks we examined were in as fine condition and as sweet as any we have seen on the Atlantic slope. Western men with us corroborated our botanist in saying that this is really a fine grazing country, and capable of sustaining a very large number of cattle. The condition of cattle we saw about St. Paul and on Spruce Island, and at the freedmen's settlement was fine, and the flavor of the beef we obtained was good. . . . During our stay at Kadiak, from August 26th to the 31st, the mean temperature of the air was $49^{\circ} 5$, and of the water, $45^{\circ} 8$."—*Davidson*.

As we travel this coast to the westward we encounter dry, bracing weather. The peninsula of Alaska, the islands fringing it, and the Aleutian islands, are lofty and comparatively level; no timber is visible along these shores; grass and various kinds of vegetables are produced, and cattle, goats and hogs fare sumptuously. "Our stay at Unalaska was too limited to enable us to judge of the climate, except in the influence it has on the botany of the islands. . . . There are no trees of any size whatever upon any of the Aleutian islands. . . . Grasses grow luxuriantly, and when cut and cured, are used to feed the small Siberian breed of cattle through the winter. . . . But

the published meteorological observations of the Greek Blahop Veniaminoff, made at Honliouk between the years 1825 and 1834, afford much useful material from which to draw fair conclusions of the climate. . . . The mean temperature, from nine years observations, is $38^{\circ} 05$, or $4^{\circ} 9$ below that of Sitka. . . . The clearest months without clouds are December, January and February, when the north and north-west winds prevail. . . . August, September and October are the months in which the most rain falls, during which time winds from the south and south-west prevail. . . . Thunder storms are rare, only seventeen being recorded in seven years, and some in winter." — *Davidson*.

Winds along the coast differ with the seasons; during the spring and summer months south-west winds generally prevail along the southern and western shores; in the autumn and winter seasons, north-west, north and north-east winds are regular, with occasional breezes from the southward. Fogs are common along the shores, but not very dense, being much lighter than those around the Golden Gate—the entrance to San Francisco. "The prevailing winds in winter are easterly, and if from the southward are accompanied with rain and snow; when from the north-east the weather is generally clear and cold. La Perouse says that when the wind is but a few degrees north of west, the sky is generally pretty clear. When approaching Behring Bay, he says: 'I first thought these seas more foggy than those which separate Europe and America, but I should have been greatly mistaken to have irrevocably embraced this opinion.' The fogs of Nova Scotia, Newfoundland and Hudson Bay have uncontested claim to pre-eminence from their constant density. The stormy weather commences in October; storms and tempests are frequent in November and December, and from the vicinity of Sitka the aurora borealis is seen frequently and very brilliant during clear, cold nights. The winter weather breaks up about the end of March, and the Russian-American Company's vessels are ready for their first fur-trading early in April, when the weather is cold but comparatively dry. March, April, May, June, July, and sometimes August, are good months, with an average monthly rain-fall not much greater than on the Atlantic coast." — *Davidson*.

Timber. The south-eastern angle of the territory is densely covered with forest; several varieties of wood are found con-

venient to acceptable harbors. The Sitka spruce predominates, and in some cases attains enormous dimensions; this timber is well adapted for staves, headings and wharves. Yellow cedar is very abundant, has a close grain, remarkable elasticity, and is well adapted for the general purposes of shipbuilding, is proof against the sea worm, and makes good bottom plank, ceiling, clamps, bends, and a superior article for deck plank; the Russians have used this wood successfully in ship and other building for nearly a century, and it has given general satisfaction. "The prevailing forest tree is the Sitka spruce, growing to a great size, covering every foot of ground, and climbing the steepest mountain sides to the height of 2500 feet above the sea. We measured felled trees of this spruce that were 184 feet long, and four feet thick at the butt, while adjacent standing trees were over six feet in diameter, and branchless for over fifty feet. Hemlock, alders and willows are found, but the most valuable wood of the country is the yellow cedar, with a fine even texture, fragrant smell, good size and greater strength than the spruce. We first called public attention to the Port Oxford white cedar in 1851, and while admitting its many good qualities, we have no hesitation in saying that the yellow cedar of Alaska is a much superior wood; it is readily worked, takes a smooth surface, and is remarkably durable. It will make a valuable addition to the cabinet woods of the California market, is superior as a ship timber to any on the coast, and from our short examination we are satisfied that it may be obtained of ample size for the frames and knees of ordinary sized vessels. At Skalitch anchorage one was measured eighteen feet in circumference, and estimated at over 120 feet in height. We obtained and forwarded part of the keelson and frame of one of the Russian American Company's small vessels which was constructed of this wood over thirty-two years ago, and had been lying a wreck on the beach several years; it exhibits not the least sign of decay or toredos attacks, the wood around the iron and copper bolts is nearly as well preserved as on the day they were driven. The hulls of all the trading and fishing vessels on this new coast may be constructed of this durable wood upon any of the innumerable bays of the Alexander Archipelago; we have seasoned a small piece of it for one year in a dry, warm room, and it has a weight indicating twenty-six pounds to the cubic foot; under ordinary seasoning the weight would be over thirty pounds." — *Davidson*.

Minerals have been found in various parts of the territory ; coal and iron are plainly visible to the naked eye along the shores on Cook's Inlet ; gold has been found in paying quantities ; silver, copper and bismuth have been discovered in localities convenient to navigation. " Of these little is known, and Prince Maksutoff, late Governor of the Russian Colonies, acknowledged that the company had been so persistently engaged in procuring furs and studying up the best methods of keeping up the supply, that no thorough minerological exploration had been made, although a large cabinet of minerological specimens for comparison had been furnished by the company to the chief establishment at Sitka. Under his directions the very few specimens of Alaska minerals in possession of the servants of the company were transferred to the coast survey and referred to the geologist. . . . The most important discovery was made by the coast survey in October, 1867, in the valley at the head of St. John's Bay, opening upon Newaki Strait about seventeen and one-half miles northward of Sitka. Pieces of coal, largely intermixed with rock, to which their preservation was due, were found four or five miles along the bed of the small but rapid stream. After a second partial exploration, and obtaining large specimens, it was believed the coal was anthracite, . . . but from all the geological evidence the geologist reported that the bed or beds from which it was broken will, if discovered, afford coal of vastly superior quality to any heretofore known to exist in the territory, and the government was advised to direct exhaustive examination of this locality. Recent information has been received that this coal vein, which has been discovered, is of great thickness, is an anthracite, has been burnt on a United States steamer, and reported upon favorably. . . . Should petroleum come to be used as a steam producing fuel on steamships, there is a prospect of a supply being obtained from the south-east shore of Alaska peninsula, at or near Katmay Bay, in lat. $58^{\circ} 51'$, long. $154^{\circ} 54'$, and abreast of Kadiak islands. The governor furnished the coast survey with a specimen of the crude oil obtained there two or three years ago. The finder, a teacher in the Russian-American Company, reported that he found three streams in the above locality covered with petroleum. Specimens of fine copper have been gathered from various localities, but the principle source is on the Atna or copper river, about twenty-five or thirty

miles above its mouth, where discovery and research are retarded on account of the reported hostility of the natives. . . . All the peculiarly figured copper-plates of the natives, twenty-six by fifteen inches, and so much-prized as heir-looms by the Indians as far south as Vancouver's island, are hammered out of pure copper obtained from this river. . . . Gold is found on the Sticknine river, and even with very crude means of working the miners report that they can make from \$2 to \$7 per day, but the climate forbids them working more than six months of the year. Proper methods of working the fine gold placers of this river would yield twice the amount. Gold is reported to have been found by mining engineer Doroschin on the Kenay river, which enters Cook's inlet on the eastern shore about lat. 60° 32, at the Russian station of St. Nicholas, but we have no authentic information on the subject beyond the statement of Tebenkoff.* In little Naquashinaki inlet, fifteen miles from Sitka, the coast survey party discovered very fine marble in inexhaustible quantities, and at the mouth of the Chilkah specimens of marble of a very coarse grain, and others of a very fine crystalization, were discovered, all being white, very pure and unmarked. . . . The hot springs laying on the south-west part of Sitka Sound, were not visited, and we know nothing more than the meagre descriptions of Lisiansky, Simpson, and others. There are four distinct springs issuing from fissures in the granite rock. At its source the principal spring has a temperature of 153½° Fahrenheit, and is chiefly impregnated with sulphur, but also has salt and magnesia in solution. There is also a large basin, purposely dug in the ground, to receive the waters of the springs, about two or three hundred yards from the beach and fifty feet above high water; in this basin the water has a temperature of about 100° Fahrenheit. Two substantial buildings of hewn logs, erected by the Russian Company for hospital cases of chronic rheumatism and cutaneous diseases, are situated on the sloping face of the bank; in front lies a pretty little cove, completely sheltered by an archipelago of small, wooded islands; in the rear is a barrier of rugged mountains, while immediately within the influence of the warm waters and continually rising vapors, there grows a luxuriant

*We visited Fort St. Nicholas in September, 1880, and saw specimens of coarse gold among the people residing in that vicinity; we brought several soldiers from the military post at that place to San Francisco; they exhibited quantities of gold which they obtained in the mines above stated some weeks previous, and reported the placers rich in coarse gold.

verdure even where all around is clothed in snow. The waters adjacent are alive with fish and fowl, and the land teems with deer and other game." — *Davidson*.

The Memorial from the Legislature of Washington Territory, (above quoted), asked the President "To employ such ships as might be spared from the North Pacific naval fleet, in surveying the fishing banks along the coast from the Cortez bank to Behring Strait." Our beneficent government has nobly responded to this prayer. Immediately on assuming jurisdiction over Alaska, a scientific expedition in connection with the coast survey was sent to that territory, instructed to collect correct information in regard to geographical science, climate, products of the country, ocean currents and their future bearings on the question of the steamship route to the Indies; also to ascertain the bounds and extent of the fishing banks, and the facilities for developing the fishing resources in those waters. Banks have been found and partially surveyed in Bristol Bay, around the Aleutian islands, along the peninsula of Alaska, and adjacent to the Kadiak group. The eastern half of Behring Sea, a broad, level plateau, having from twenty to forty fathoms of water, is found to be a boundless reservoir of cod, containing about 20,000 square miles. "The extensive sheet of water north of the Aleutians to Behring Strait, in lat. 65½°, and between the American and Asiatic continents, is known as Behring Sea, and, so far as sounded, consists of very extensive submarine levels of remarkable evenness of surface at a very small depth." — *Davidson*.

The Unmak bank, margining the Aleutians, Shumagins and Kadiak islands are somewhat deeper; those grounds amount to nearly 45,000 square miles, embraced within the fifty fathom curve. "The banks along the shores of Alaska, around the Kadiak group, and part of the Aleutian chain, will add not less than 45,000 square miles, with a depth of not over fifty fathoms to the 18,000 miles of the Behring Sea." — *Davidson*.

The waters extending eastward from the Kadiak islands indicate light appearance and moderate soundings. Early navigators report a vast, broad plain in this region, with fathomable depth; no definite bounds or deepness have as yet been ascertained, and the extent of this valuable fishing ground remains undefined. "The soundings of Portlock, of Vancouver, and of this expedition, prove the existence of a comparatively shoal bank, extending along the south-eastern coast of Afognak and

Kadiak, twenty-five miles east of St. Paul. The shoalest water obtained on this bank by this expedition was forty-five fathoms, in lat. $58^{\circ} 15'$, long. $149^{\circ} 42'$. It is fair to assume that this bank extends along the south-east shore of Kadiak, as incidental and unconnected observations indicate." — *Davidson*.

Here we find a vast nursery of commerce — Behring Sea, Unimak, and the Portlock banks, comprising over 100,000 square miles of available fishing grounds, greater than those in the German Ocean and all the known banks in the North Atlantic, including those fringing the British Islands, Shetlands, Faroes, Iceland, Greenland, Labrador, Newfoundland, Gulf of St. Lawrence, Nova Scotia, New Brunswick and the New England States. On every part of this vast area, plump, solid, sweet cod may be taken as fast as they can be dressed and kenched. "The bank where trial was first made for fish was found on the fifteenth of September; during a prevalence of thick weather. We fortunately seized an opening and obtained good observations for longitude, with an approximate latitude; the position is in lat $58^{\circ} 35'$, long. $164^{\circ} 10'$, and near it soundings were obtained in fifty fathoms of water, the lead bringing up sand and a small starfish. With thick, drizzly weather, the vessel drifted to the north-west by the compass, until sixty fathoms were struck, with sandy, pebbly bottom; here the lead-line was baited, and while on the bottom the first cod took the hook. The fish proved very plenty, fat, and bit eagerly; frequently two were brought up on a double-hooked line, and sometimes three were brought up on a line with three hooks. The largest measured thirty-seven inches in length, and several reached thirty-six inches. The finest was thirty-six inches long, twenty-three inches girth, and weighed twenty-seven pounds, was very fat, and certainly of as fine, if not finer, flavor than cod we had eaten eleven months before, freshly caught on the south coast of Newfoundland. The vessel drifted all the afternoon over this bank with the same depth of water, the fish biting well, although they appeared in capital condition, their maws being full of food, such as squid, halibut-head, fish the size of a herring, sea lice, &c." — *Davidson*.

Halibut are found on these banks; they are smaller than those found in the North Atlantic. On a small patch near the island of Sanak, west of the Shumagins, they are found abundantly and much larger than those taken in the adjacent waters; in some

cases they weigh over 100 lbs. dressed, and are very sweet. "In lat. $54^{\circ} 20'$, long. $162^{\circ} 30'$, about nine miles south-east from the Sanak reef, we got bottom in thirty-five fathoms, rock and barnacles being brought up by the lead. In nearly this last locality Cook caught over one hundred halibut, ranging from twenty to one hundred pounds each; he therefore applied the name of Halibut island to it." — *Davidson*.

The keen, searching fishermen from California and Washington Territory, have for several years past fished on these grounds; in Bristol Bay and around the Shumagins they have found cod and halibut very plenty; the business has been fairly tried with profitable results. "Next to the fur-trade, in its legitimate pursuit, the fisheries off the coast of the new territory will prove the most valuable and certain; in fact, I consider them the most important acquisition to our Pacific coast. As the banks of Newfoundland have been to the trade of the Atlantic, so will the greater banks of Alaska be to the Pacific, inexhaustible in supply of fish that are equal, if not superior in size and quality to those of the Atlantic; and the pursuit there of developing a race of seamen yearly decreasing, as our steam marine, merchant and naval, is increasing. We have the reiterated and disinterested statements of all the old navigators and fur-traders, that every part of the coast abounds in cod, halibut, salmon, and every variety of fish inhabiting comparatively cold waters, and the experience of the present expedition establishes the truthfulness of their descriptions. But the most valuable fish on the coast is the cod, and so far as ascertained, it has already been very profitable to those interested in it. . . . The waters between the Alaska peninsula and the Shumagin islands are well protected from the heavy swell of the Pacific. All the California fishing vessels now resort to the grounds about the Shumagins, where fish are very plentiful and superior to those in the Ochotak Sea. Among the islands are very good harbors; fresh water is everywhere readily obtained, and some drift-wood for fuel may be collected along the shores. But the greatest advantage is, that vessels when fishing may always lie under the lee of some one of the numerous high islands, thus making fishing a much more comfortable business than when riding out in the open sea. The kind of bait used here is salted herrings from San Francisco, and halibut and sculpins caught on the ground." — *Davidson*.

Salmon. This dear, aristocratic fish, so scarce in the warmer waters of the North Atlantic, fairly revel in and around the southern and western shores of this enormous territory. Salmon trout are found around the islands on the coast; they congregate in millions near the mouths of the mountain gulches, and range from twelve to fifteen inches in length, solid and very fat. This fish may be taken in great numbers; packed in small packages for mining and other inland consumption, this delicious luxury is destined in a few years to take the place of the miserable trash of rusty mackerel now poisoning interior communities on our continent. Silver salmon are also found around the islands in countless numbers; they generally resort to the small rivers on the islands. We observed many of them around the Kadiak group; they are larger than the salmon trout, and may be seined in millions. When properly dressed and pickled this fish commands a premium in the markets of the world. In the Stikine, Copper, Cook, Nooshgak, Yukon, and the larger rivers draining the southern and western coasts of the territory, enormous large, fat salmon are found. This fish attains extraordinary size, ranging from thirty to fifty, and in some instances, sixty inches in length, many of them girding thirty inches; we have witnessed several in Cook's inlet, divested of head, back-bone and tail, cleanly dressed, that weighed over 100 lbs. The waters bathing these shores for thousands of miles teem with salmon; we have seen them reveling in these waters twenty leagues off shore; they may be taken in sufficient numbers annually to supply northern America and Europe, at figures competing with mackerel, pork or beef. This sure industry offers the most tempting inducements to the energetic young fisherman possessing means and pluck. We have great confidence in this fishery, and earnestly commend it to the most favorable attention of fishmongers. "At some of the entrances to shallow, fresh water streams, the water is packed with salmon, and bears come down in numbers to feed upon them, selecting the heads only. On some of the beaches near these streams the seine will take them in thousands. In the bays leading to the streams, at their head on the south-east side of Alaska peninsula, the salmon are crowded so thickly that the progress of a boat is impeded, and should a south-east storm arise at such times the fish are driven on the beach in innumerable quantities; one of the Russian navigators assures us that he has seen the beach strewn two to three feet thick with the

stranded salmon. . . . Seeman says that salmon, so frequent in Norton Sound, lat 64° , are not found to the northward of the river Buckland, emptying into Kotzebue Sound, in lat. $66^{\circ} 05'$; they appear however to be superceded by the mullet, which attains considerable size. He obtained, for a blue bead, a mullet thirty-three inches long, weighing twenty-one pounds."

— *Davidson*.

Herring abound in these waters; they vary in size in different localities; those taken in the waters adjacent to Sitka are small and poor; those found in Behring sea are large, plump and fat. "In September, when drawing the seine for salmon at Ilionlionk harbor, several herring were obtained of large size, fatter, and of much finer flavor than the herring caught on the California coast. No information was obtained of the season when they visit the coast. They are found in the vicinity of Sitka, and doubtless visit the whole sea-board. Portlock mentions that when hauling the seine, he caught large quantities of herring and some salmon. The herring, though small, were very good, and two hogsheads of them were salted for sea stores. Lisiansky says, herring swarm in Sitka Sound every spring. Seeman says that herring and whiting are caught in Hotham Inlet, in Kotzebue Sound, lat. 67° , in great quantities. . . . The herring, besides its own intrinsic value, has an important bearing on the question of the cod-fisheries, in supplying bait, which is now carried from San Francisco for that purpose at large prices." — *Davidson*.

Fur-bearing animals have, from time immemorial, resorted to the shores of Alaska. Cook and other early explorers describe those animals in detail; they still bask on that coast in millions, and yield rich oil, ivory and peltry, and the fur of the sea otter is held in high estimation. The otter has been hunted with much ardor by the skilful Aleuts; the extermination of this animal in those waters is a mere question of time. "Of the number and different varieties of skins obtained from the Indians by the Russian-American Company, it is impossible to form an opinion, as the very existence of their trade depended upon the secrecy with which it was conducted. That the company has been able to maintain a large establishment in persons and material is strong circumstantial proof of the value of the trade. . . . The immediate traffic of the company has given trade to not less than 10,000 Russians, Aleuts and Esquimaux, be-

sides 5800 Koloschians, who act as inter-traders with the numerous Indians of the interior. The Company has numerous stations or factories throughout the length of the coast and among the Aleutian islands, maintaining nearly 1000 people regularly, two fine steamers and several smaller ones, eight bargees, brigs, etc., and numerous boats. The value of the furs may be estimated yearly at not less than \$1,000,000 in gold, as the company insures their regular shipments for \$600,000. By the time these furs reach our markets they are doubled in value."

— *Davidson.*

In our remarks on the branch of the Japanese current washing the islands of St. Lawrence, (in another portion of this work), we should have also stated that by this strong tide, acting conjointly with the westerly winds in the spring months, blowing from the Asiatic coast, large fields of ice are crowded into the sounds, bays and coves indenting the shores of western Alaska margining Behring sea, and are held there for months by the action of winds and eddy currents. "But the whole of the waters of the Kamschatka current do not pass through Behring Strait. Striking against the south shore of the large island of St. Lawrence, part of the waters are deflected to the eastward, southward, and finally westward of south, casting their floating wood on the American coast and the north shores of the Aleutian islands." — *Davidson.*

On those ice fields the hair seals congregate annually in millions. They are large and very fat, yielding rich clear oil and valuable skins. This industry invites development and offers sure reward to hardy seamen of nerve and capital. The seal fisheries have been profitably prosecuted for centuries along the coasts of northern Europe. The Danes have realized immense revenues from this branch of industry around the shores of Iceland and Greenland. The expert fishermen on the eastern coast of Newfoundland have reaped golden harvests from the seal fishing; in the recent spring months an extraordinary number were taken. The income from the seal fishery amounted to over \$2,000,000 in coin. Taking into consideration the temperate climate in the Behring sea, the boundless seal fields, the absence of icebergs, the smooth water, and the certainty of success, may we not look for great development in this inviting industry?

Fur Seals, so relentlessly hunted in other climes, have for years resorted to the islands of St. Paul and St. George in

Behring sea. Washington Irving has given this animal historic renown. He says: "The Beaver sailed from Astoria on the fourth of August, 1812, under the management of Mr. Hunt, the local agent of the fur company. He arrived at Sitka on the nineteenth of the same month. Count Baranoff, Governor of the Russian Fur Company, purchased the cargo, for which he gave Mr. Hunt an order for a cargo of fur seal-skins, to be obtained from the factors of the company on St. Paul's island, in lat. 57° north, long. 170° west; this and the neighboring island of St. George are covered at certain seasons of the year with millions of seals; the Russians kill the young from seven to ten months old, which they drive inland and slaughter as many as are required to meet the demand. Mr. Hunt appears to have been subjected to much delay by the governor, but finally arrived at the islands in November, obtained a full cargo and sailed on the twentieth of the same month."

This statement proves two important facts germane to our subject, first—the moderation of the climate on the parallel of 57° , in the Behring sea, which enabled a large, square-rigged vessel to take a cargo of skins from an exposed island in the month of November; secondly—the abundance of seals in those rookeries sixty years ago. The Russian Company have tenderly nurtured the seals visiting those islands, and prevented the indiscriminate slaughter of those animals. It is to be hoped that a humane policy may now be followed by our government in dealing with fur-seals.

In the autumn of 1869, Maj. Gen. Thomas, commanding the Pacific division of the army, made an official tour to Alaska; he visited the rookeries on St. Paul and St. George, and devoted several days in observing the habits of those animals. In his report he gives a graphic account of the seals, their number and economy; he also suggests certain measures for the protection and preservation of those creatures. He says: "On St. Paul and St. George only are the fur-bearing seals found and killed for their furs and oil. As described by the natives, the habits of those animals are very peculiar. About the last of April or the first of May, the old male seals arrive at the islands and go on shore at the places regularly frequented by them, called rookeries; they make a thorough examination of the ground, which occupies some days; soon the great body begins to arrive, and in a short time all have come upon shore

and are collected together in communities or families, each family being governed by one of the old seals who possesses sufficient power to maintain his ground and guard them; the young males and superannuated old ones are forced to take their places outside of the arena occupied by the families, and if they attempt to interfere with the domestic arrangements described, they are summarily driven off by the heads of families. In these troubles many terrible affrays occur. This arrangement of the animals on and around the rookeries makes it very simple and easy for the native hunters to place themselves between the families and the young males, from whom only the skins are taken. Parties of forty or fifty, armed with clubs, go out to kill the seals; they get between the families and young males, and drive them inland some two or three miles, letting all not wanted for slaughter drop out by the way; these return to the rookeries. After getting only as many as they can skin and salt in one day, to the proper places, they are killed by striking them on the nose with clubs. The next day is devoted to packing for shipment. By this means the families are not disturbed and remain to breed and rear their young. As far as I can judge the business of the old males is to compel the females to take care of their young until they have grown sufficient to take care of themselves; they then appear to give up all control over the families, who are permitted to leave their young and go in the water, the old males still guarding and overlooking the young. In September all are permitted to enjoy the water, where they swim and sport during the day, coming on shore in the evening to rest during the night. At this period all move further inland and mingle together indiscriminately. If the autumn continues mild they remain on the island till the latter part of October, when they disappear very suddenly within a day or two, and have been seen going through the passes between the Aleutian islands, traveling in a southerly direction. Nothing more is seen of them until next spring, neither is it known where they pass the winter. The number of seals on the island, after the young are born, is estimated all the way from *five to fifteen millions*; but they are *countless*, lying in the rookeries, covering *hundreds of acres, like sheep in a pen*. The habits of these animals are such that, if permitted to be hunted by everybody at random, they would very soon be driven from the islands. This has been proved by the Russians, who totally destroyed some

rookeries before they learned by experience to treat them. It is desirable to protect and perpetuate the fur-bearing seal, and one of two plans should be adopted: One is to confine the killing to the natives, permitting none others but the authorized agents of the government to land on the islands; and permit traders to visit them to purchase only after the skins have been prepared and the seals have left for the south. This course would necessitate the stationing of an agent on each of those islands to guard the interests of the government, and prevent the demoralization of the natives from such unscrupulous traders as would not hesitate to furnish them with liquor for the purpose of cheating them."—*Report of Sec. of War, 1869-70, part 1, p. 118.*

The value of fur seal skins depends much on age and condition. In London the young pups, (under six months), realize about 7s. 6d.; those over that age sell for 20s.; they average nearly 12s. 6d. sterling. Basing our figures on the judgment of Gen. Thomas, which are affirmed by other authorities, we arrive at the conclusion that the seal fur rookeries on St. Paul and St. George are richly worth \$20,000,000. Those valuable nurseries of commerce were purchased of Russia and paid for by the people's money out of the Federal treasury, and thus have become the common property of the nation. Those of our people engaged in commercial pursuits on the coast of Alaska, were willing to preserve those seal rookeries to the government in the terms of the Indian Intercourse Law, and every fisherman would have gladly supported this just policy. The Chamber of Commerce of San Francisco—the watchful guardian of our Pacific intercourse, concurred in this policy and represented the facts to our national Congress at Washington; yet, in the face of all our appeals, the "assembled wisdom" of our country have bartered away those islands for a mere mess of pottage; Congress has leased the seal rookeries of St. Paul and St. George for a term of twenty years, to a monopoly of merchants, receiving in compensation an annual sum much less than it costs our government to protect those islands to the "favored few."

This law, passed in the spring of 1870, is as follows:

**AN ACT TO PREVENT THE EXTERMINATION OF FUR-BEARING
ANIMALS IN ALASKA.**

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be unlawful to kill

any fur-seal upon the islands of Saint Paul's and Saint George, or in the waters adjacent thereto, except during the months of June, July, September and October, in each year; and it shall be unlawful to kill such seals at any time by the use of fire-arms, or use other means tending to drive the seals away from said islands: *Provided*, That the natives of said islands shall have the privilege of killing such young seals as may be required for their own use, which killing shall be limited and controlled by such regulations as shall be prescribed by the Secretary of the Treasury.

SEC. 2. *And be it further enacted*, That it shall be unlawful to kill any female seal, or any seal less than one year old, at any season of the year, except as above provided; and it shall also be unlawful to kill any seal in the waters adjacent to said islands, or on the beaches, cliffs, or rocks where they haul up from the sea to remain; and any person who shall violate either of the provisions of this, or the first section of this act, shall be punished on conviction thereof, for each offence, by a fine of not less than two hundred dollars nor more than one thousand dollars, or by imprisonment not exceeding six months, or by such fine and imprisonment both, at the discretion of the court having jurisdiction and taking cognizance of the offence; and all vessels, their tackle, apparel, and furniture, whose crew shall be found engaged in the violation of any of the provisions of this act shall be forfeited to the United States.

SEC. 3. *And be it further enacted*, That for the period of twenty years from and after the passage of this act the number of fur-seals which may be killed for their skins upon the island of Saint George, is hereby limited and restricted to twenty-five thousand per annum: *Provided*, That the Secretary of the Treasury may restrict and limit the right of killing if it shall become necessary for the preservation of such seals, with such proportionate reduction of the rents reserved to the government as shall be right and proper; and if any person shall knowingly violate either of the provisions of this section he shall, upon due conviction thereof, be punished in the same way as is provided herein for a violation of the provisions of the first and second sections of this act.

SEC. 4. *And be it further enacted*, That immediately after the passage of this act the Secretary of the Treasury shall lease for the rental mentioned in section six of this act, to proper and responsible parties to the best advantage of the United States, having due regard to the interests of the government, the native inhabitants, the parties heretofore engaged in the trade, and the protection of the seal fisheries, for a term of twenty years from the first day of May, eighteen hundred and seventy, the right to engage in the business of taking fur-seals on the islands of Saint Paul's and Saint George, and to send a vessel or vessels to said islands for the skins of such seals, giving to the lessees of said islands a lease duly executed, in duplicate, not transferable, and taking from the lessee or lessees of said islands a bond, with sufficient sureties, in a sum of not less than five hundred thousand dollars, conditional for the faithful observance of all the laws and requirements of Congress and of the regulations of the Secretary of the Treasury shall have due regard to

the preservation of the seal-fur trade of said islands and the *comfort, maintenance, and education* of the natives thereof. The said lessees shall furnish to the several masters of vessels employed by them certified copies of the lease held by them respectively, which shall be presented to the government revenue officer for the time being who may be in charge at the said islands, as the authority of the party for landing and taking skins.

SEC. 5. *And be it further enacted*, That at the expiration of said term of twenty years, or on surrender or forfeiture of any lease, other leases may be made in manner as aforesaid for other terms of *twenty* years; but no persons other than American citizens shall be permitted, by lease or otherwise, to occupy said islands, or either of them, for the purpose of taking the skins of fur-seals therefrom, nor shall any foreign vessel be engaged in taking such skins; and the Secretary of the Treasury shall vacate and declare any lease forfeited if the same be held or operated for the use, benefit, or advantage, directly or indirectly, of any person or persons, other than American citizens. Every lease shall contain a covenant on the part of the lessee that he will not keep, sell, furnish, give, or dispose of any distilled spirits or spirituous liquors on either of said islands to any of the natives thereof, such person not being a physician and furnishing the same for use as medicine; and any person who shall kill any fur-seal on either of said islands or in the waters adjacent thereto, (excepting natives, as provided by this act,) without authority of the lessees thereof, and any person who shall molest, disturb, or interfere with said lessees, or either of them, or their agents or employees in the lawful prosecution of their business, under the provisions of this act, shall be deemed guilty of a misdemeanor, and shall for each offence, on conviction thereof, be punished in the same way and by like penalties as prescribed in the second section of this act; and all vessels, their tackle, apparel, appurtenances, and cargo, whose crews shall be found engaged in any violation of either of the provisions of this section, shall be forfeited to the United States; and if any person or company, under any lease herein authorized, shall knowingly kill, or permit to be killed, any number of seals exceeding the number for each island in this act prescribed, such person or company shall, in addition to the penalties and forfeitures aforesaid, also forfeit the whole number of the skins of the seals killed in that year, or, in case the same have been disposed of, then said person or company shall forfeit the value of the same. And it shall be the duty of any revenue officer, officially acting as such on either of the said islands, to seize and destroy any distilled spirits or spirituous liquors found thereon: *Provided*, That such officer shall make detailed report of his doings to the collector of the port.

SEC. 6. *And be it further enacted*, That the annual rental to be reserved by said lease shall be not less than fifty thousand dollars per annum, to be secured by deposit of United States bonds to that amount, and in addition hereto a revenue tax or duty of two dollars is hereby laid upon each fur-seal skin taken and shipped from said islands, during the continuance of

such lease, to be paid into the treasury of the United States; and the Secretary of the Treasury is hereby empowered and authorized to make all needful rules and regulations for the collection and payment of the same, for the comfort, maintenance, education, and protection of the natives of said islands, and also for carrying into full effect all the provisions of this act: *Provided further*, That the Secretary of the Treasury may terminate any lease given to any person, company, or corporation on full and satisfactory proof of the violation of any of the provisions of this act or the rules and regulations established by him: *Provided further*, that the Secretary of the Treasury is hereby authorized to deliver to the owners the fur-seal skins now stored on the islands, on the payment of one dollar for each of said skins taken and shipped away by said owners.

SEC. 7. *And be it further enacted*, That the provisions of the seventh and eighth sections of "An act to extend the laws of the United States relating to customs, commerce, and navigation over the territory ceded to United States by Russia, to establish a collection district therein, and for other purposes," approved July twenty-seven, eighteen hundred and sixty-eight, shall be deemed to apply to this act; and all prosecutions for offences committed against the provisions of this act, and all other proceedings had because of the violations of the provisions of this act, and which are authorized by said act above mentioned, shall be in accordance with the provisions thereof; and all acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 8. *And be it further enacted*, That the Congress may at any time hereafter alter, amend, or repeal this act.

This bill of pains and penalties, so loose in the letter, and so stringent in its spirit, prohibits the killing of seals even in the adjacent waters, or on the cliffs or rocks where they haul up from the sea to remain. This law has already become an engine of much annoyance to our citizens around Alaska. The Secretary of the Treasury has construed it in such a spirit as to exclude all American fishermen from the seal fisheries in the North Pacific Ocean. Instructions, carrying out these restrictions, have been issued to all the revenue officers on the north-west coast; we append the official *Ukase* of the Collector of San Francisco, and humbly invite the careful attention of our readers to this Card:

CUSTOM HOUSE, SAN FRANCISCO, CALIFORNIA, }
Collector's Office, September 28, 1870. }

NOTICE. — In compliance with an order of the Hon. Secretary of the Treasury, notice is hereby given that a lease of the Islands of St. Paul and St. George, in the Territory of Alaska, has been executed by the Secretary of the Treasury to the Alaska Commercial Company, for the period of twenty years, from the 1st day of May, 1870, in accordance with the provisions of an Act of Congress, entitled "An Act to Prevent

the Extermination of Fur bearing Animals in Alaska," approved July 1st, 1870, and that by the terms of said lease, and the above mentioned Act, the said Company have the exclusive right to engage in the business of taking fur seals on said Islands and the Islands adjacent thereto. No vessels other than those belonging to said Alaska Commercial Company, or to the United States, will be permitted to touch or land at either of said Islands, or the Islands adjacent thereto, nor will any person be allowed thereon except the authorized agents of the United States, and of said Company.

T. G. PHELPS, Collector of Customs.

This villainous law, passed ostensibly for the protection of fur bearing animals, should have been more justly entitled: *An Act to Enslave the People of Alaska, to Obstruct the Fisheries, and to Check the Development of the North-west Coast.* By the terms of this act the inhabitants of St. Paul, St. George and the adjacent islands are strictly walled in, being forbidden any intercourse with "the rest of mankind;" they are forced by necessity to sell their products to the company, and to receive such considerations in return as this soulless monopoly may see fit to give. The obstructions which the fur company has in former years thrown in the way of individual traders and fishermen in those regions, are very well known. The subsidized federal officers in the interests of the company, have given much trouble to private enterprises; several vessels have been seized, on very flimsy pretexts, and sent for trial to San Francisco. In every instance those vessels have been liberated, and the masters and supercargoes exonerated by the courts. Voyages have thus been broken up, heavy losses have fallen upon humble adventurers, failures have followed, and peaceful commerce has been seriously obstructed. Several suits for heavy damages are now pending in the courts on the North Pacific coast, against the revenue officers formerly serving on the coast of Alaska.

During our sojourn in Alaska we met Gen. J. C. Davis, Commander of the Department of Alaska; in him we found a kind, christian officer, free from sordid motives, and strongly imbued with the future welfare of the helpless people over whom he governed. The opinions of this brave officer deserve respect. We submit his expressed views on the "Fur-Seal Monopoly," and the influence which this privileged body exerts over the helpless people dependent upon it. He says: "Since the declaration of Congress, at its last session, of St. Paul and

St. George's islands as special reservations of the government; they have been under the control of officers of the revenue service, sent there for the purpose of executing the laws prohibiting the landing at or killing of fur seals upon them. During my official visit there in the beginning of the present summer, and whilst engaged in investigating the affairs of the natives, as well as the manner in which the troops had performed their duties, I learned that, under one pretext and another, privileged parties had been permitted to land and remain on those reservations, and had been allowed to kill the animals at pleasure. During last summer at least 85,000 seals were killed on the two islands; probably more than that number. The pretexts under which this was authorized was that of enabling the natives to subsist themselves without expense to the government. In an economical point of view this would seem quite right, but the facts are that the natives are cooped upon these islands, where they are compelled to work for those private parties or starve; in other words *they are to-day in a complete state of slavery*. Competition in trade has been universally established, and is now pretty well understood by the natives and traders throughout the country; wherever the former can paddle his canoe, or the latter penetrate with his goods, such is the case. *These isolated islands of St. Paul and St. George in Behring sea, the richest possessions in natural wealth, considering their small area on the continent, form the only exceptions. The natives are peaceful, honest, and capable of transacting ordinary business quite well, and would doubtless improve themselves if they had a fair chance, but their present complete enslavement and robbery by an unscrupulous ring of speculators, will ever prevent such progress.*" — Report of Brevet Maj. Gen. Commanding Department of Alaska, to Sec. of War, Aug. 20, 1870.

If the visible or invisible treasures on the north-west coast, or in the waters adjacent, are subject to the caprice of Congress; the acquisition of Alaska is of little value to our people; if Congress can thus barter the rich seal rookeries to a few favorites, it may, with an equal show of right, trade off the enormous rich salmon fisheries in those waters; if our national representatives in Congress assembled, can, in any way, or for any consideration, lease any branch of national industry in or around Alaska, they can also grant away Cassius' ledge, Jeffrey's bank, the shoals of Georges, and all the most valuable fishing grounds.

on the New England coast. The rotten monarchies of Europe, long kept together by the "cohesive power of public plunder," have, by the prestige of public opinion, been forced to withhold special privileges from any special class. The British Parliament, half a century ago, refused to renew the charter of the wealthy East India Company;" a few years ago they withheld all special privileges from the powerful Hudson's Bay Company; no class legislation has passed that body for many years. The despotic government of Russia appears to have caught the inspiration of our day and generation, and against the power and blandishments of the great fur company, sold out Alaska, root and branch, to our government. The Congress of the United States, like the Bourbons, "never learns nor forgets;" it is high time that this body should see the handwriting and give heed. It is to be hoped that wiser counsels may yet prevail and that this odious law may be repealed before it is too late; "other men in other times" will repair the damage; in the meantime our diminutive Congressmen may learn "that there is a greater power behind the throne than the throne itself." Sincerely believing that the "Fur Franchise" in Alaska is obstructive to the development of the vast resources latent in those regions, subversive of the best interest of the people of that territory, and embarrassing to the traders and fishermen in and around those shores, we most earnestly ask Congress to repeal that odious measure and let "justice be done though the heavens fall."

Walrus are abundant around the Behring Sea; they are very large and fat, yielding considerable oil and ivory. Walrus hides have, of late years, been used for various purposes; it makes good belting for mills; when properly tanned it polishes well, and is very generally used in burnishing cutlery, ivory and sundry hard surfaces. The island of St. Lawrence affords a genial nursery for those animals, and many are slaughtered annually by the whalers. This business offers profitable rewards to ambitious young men of nerve and money. "Walrus ivory. Coal harbor, on the north side of the island of Unga, has been the point for receiving the tusks obtained from the walrus islands, on the north side of the Alaska peninsula. During the winter the walrus is said to be driven by great bodies of ice into the bay, thirty miles long and ten miles wide, embracing the walrus islands. Here the natives kill them, secure their tusks and trade

them to an employee of the Russian-American Company stationed at the store-house in Mollier's Bay, at the mouth of a small stream in lat. $55^{\circ} 55'$; long. $160^{\circ} 41'$; thence the stock is carried on the shoulders of the natives, or on dog sledges, across the peninsula to the head of Portage Bay, twelve miles deep by four miles wide, lying N.N.W. and S.S.E. by compass, and directly north of Unga island. In Portage Bay they are met by another body of natives in their *bydarkas* or skin canoes from Coal harbor, whither the tusks are transported. In some seasons ten tons of these tusks are secured by the Indians, and are valued at seventy cents, gold, per pound at Sitka. Large quantities of tusks are obtained by trade and capture by the Arctic whalers, who also try out the oil. The skin of the walrus is used by the Aleuts and Esquimaux for constructing their large travelling boats, called *biadars*, capable of carrying ten tons of freight. At the saw-mill on Woody island, opposite St. Paul, the walrus hide is successfully used for heavy belting. The systematic hunting of the walrus, prompted by the better prices than have been paid by the barely life sustaining tariff of the Russian-American Company, will develop this valuable branch of industry. Arctic whalers just from those waters, assure us that the number of these animals is incalculable. Near Point Mulgrave, in the Arctic, Cook found them in great numbers; one weighed 854 pounds; and they are generally about the size of an ox. Near Cape Lisburn the number of walrus is almost incredible; his crew liked their flesh and called it 'marine beef.' — *Davidson*.

Whales are regular visitors to the coast of Alaska; the abundance of small fish and other whale feed in those waters attracts the huge monsters to those shores. The Gulf of Alaska, Bristol Bay and the Arctic Ocean are familiar cruising grounds to the whalers. The great bow-head, rich in oil and bone, preys constantly on the finny tribe. This branch of fishing has been carried on for years in those regions with good results, and may be carried on profitably from Puget Sound, which offers every facility for "plum pudding," or short season whaling. "The waters surrounding the territory of Alaska have always been celebrated for their whale fisheries, and the Russian-American Company formerly paid some attention to this branch of industry and profit, and had surveys made in Cook's Inlet for ascertaining the proper anchorages and harbors for their whalers in winter.

They even established a shipbuilding establishment in Resurrection bay, on the eastern shore of Kanay peninsula, and employed an English superintendent; but as the whaling was not so remunerative as the fur trade, their whole efforts were directed to the full legitimate development of that business.

Captain Bryant says that Fairweather ground is, at proper seasons, the great receptacle of the mollusk called whale's food, a minute animal about the size of a flax seed, and having a gelatinous consistency; myriads of them cover the ocean like a scum. This mollusk drifts along with the coast current toward the west at the rate of about one mile per hour. During this season the sea and all the adjacent bays are filled with whales. The mollusk collects under the lee of the submarine range of Pamplona. The whaling season continues from the last of June to the middle of July. About Analaaka we saw numbers of sperm whales in September, and in August the sperm whaler 'William Gifford' was entering the north strait of Kadiak to fill up, reporting as having left the coast of Queen-Charlotte's islands, where four other sperm whalers were fishing that season. The 'Gifford' had been out from New Bedford since 1863, her time being five years. She had sent home 2700 barrels of sperm oil, worth \$90,000 in gold, and had on board 400 barrels more, intending to take nothing but sperm whale until near the end of her cruise. For the last six years the whaling fleet of the Arctic has averaged not less than eighty vessels, of which seventy belonged to the United States. Their average catch in those water amounts to not less than 1200 barrels each, and about 30,000 pounds of whalebone. The principal reason given by the whalers for preferring the Arctic regions over the Gulf of Alaska is, the shallower water. . . . The command of all the bays and straits of the north-west coast resorted to by whales gives very great advantages to our whalers, and need only be mentioned to be appreciated; fishing at all seasons, opportunities to winter and refit, depots for cargoes, and regularity in transshipping thence to the east or to the Pacific ports. It opens the broad question whether whaling cannot be more effectually and more profitably done in smaller vessels, specially designed and constructed for capturing the whale, and then storing the oil at some depot in the Behring sea where it can be regularly shipped to its destination, while the vessel, working until the latest day of the season, discharges her crew of Aleuts

among their island homes, and lays up for the winter in Alaskan harbors, ready for the whaling grounds at the earliest opening of spring. If this be done, with the increased knowledge of the whale's habits and the aptitude of the Aleuts, the American whalers can sweep the field of foreign competition." — *Davidson*.

Sardines, smelts, candlefish, and other small but valuable fish congregate in vast numbers in and around Alaska. In sailing along that coast the treasures of the deep are ever present; the untold wealth there latent surpasseth knowledge. This boundless and inexhaustible nursery of commerce fairly puzzles the will and completely captivates the thinking mind in contemplating a theme so grand. The fishing resources bordering on Alaska are five times more extensive and ten times more valuable than those now available in the North Atlantic Ocean. This important acquisition to our national wealth is richly worth *one hundred millions of gold dollars*, and is destined to nurture a great commerce in those regions, and cover the North Pacific Ocean with swift clipper vessels.

Population of Alaska comprises various tribes of Indians, and a remnant of Russians. They are found in communities along the entire coast, and it is difficult to ascertain their numbers, as they are migratory in their habits. The interior regions of the territory are as yet unexplored, and little is known concerning the tribes remote from the shores. In every part of this boundless coast, open to navigation, people are found in considerable numbers; they have been computed as ranging in numbers from fifty to sixty thousand. Those domiciled near the shore have been reared under the iron heel of Russian despotism. They are docile and subservient. They have been nurtured in the admonition of the Greek Church, and are generally devoted to the doctrines and discipline of that venerable institution. In the more prominent towns they have had the benefits of schools, and the rudiments of education have been disseminated among them. In their relations with strangers they are kind and hospitable, and very honest; in mechanical ingenuity commendable progress is manifest. They build substantial boats and make tight fish casks. They display some craftiness in capturing the sea otter and the larger monsters in those waters; in developing the fisheries the expert Aleutes will render valuable services. "The Aleutes are very distinct in their looks, manners, language and customs from all other

Indians of the northwest, and many of them bear a close resemblance to the less marked of the Japanese, so much so that a question at once arises whether this people has not been directly derived from castaway or shipwrecked inhabitants of Japan, carried thither by the Kamchatka branch of the great Japanese stream. . . . They are quiet, patient people, gifted with a great deal of ingenuity, and always trusted by the Russians. The priest of the Unalaska district is an Aleut, and a man of more than ordinary ability and taste. The surgeon of the Company's Service at Ilionlonk, now of the Coast Survey Tidal Observer, is also a full blooded native, who has acquitted himself creditably in his observations. Many of the block houses of the Russian Company are constructed by the Aleutes, and the church at Ilionlonk is a good specimen of their workmanship; even the capitals of the interior wooden columns were carved by them with rude means. They make skillful mechanics, and the principal mechanic and instrument repairer at Sitka is an Aleut, who early displayed great talent, and was sent at the Company's expense to St. Petersburg, where he learned the business of an optician. His workmanship exhibits talent that needed a large field to develop. . . . The thirty-eight charts of Tebenhoff's atlas were drawn and engraved upon copper by a half-breed Aleut named Kadin. The bidarkas or skin canoes of the Aleutes, constructed for one, two or three persons, are fine specimens of ingenuity and form; the light frame is constructed of wood. . . . In the management of those canoes they display cool courage and thorough knowledge of their capabilities. . . . As models they are not excelled by any of those seen on the Pacific coast; and as simple mechanical constructions, they are vastly superior to any southward. Their large skin boats, biadars, capable of carrying from forty to sixty persons, were used in trading between distant islands as far as St. Paul and St. George, when the Russians first reached the country. They are still in use, and were employed at Ulakhita harbor to coal the steamer. The Aleutes are very ingenious in their traps for catching the small fur-bearing animals—very neat in their spears, walrus harbs, and sinew-twine—and apt in adopting the simplest means to obtain their ends. . . . They soon become very handy with the use of ordinary tools, do good blacksmith work, use the lathe, etc., but, unfortunately, have had few incentives to con-

tinued industry and improvement. . . . In carving figures from walrus tusks, or the tusks of the fossil mammoth found in Kotzebue Sound, the Aleuts display patience, and in many cases considerable ingenuity, constructing out of walrus tusks small figures of hunters, rock, seal and fish, representing the practice of seal-hunting, making mimic representations of their dancing and musical entertainments, etc. In hunting the sea-otter and seal they exhibit their tenacity of purpose by watching for days at a time rather than lose the object of their pursuit. They do not use the bow and arrow, but the small ivory-headed spear, thrown with the aid of a hand-board, and their exhibitions of skill proved their expertness and proficiency. Most of the crews of the Russian Company's vessels are composed of Aleuts. Another peculiarity in their favor:—at Unalaska, whenever a woman was one of two or three persons in a bidarka, she was not compelled to use the paddle, as we have heretofore invariably seen on the Pacific coast. The women are very ingenious in making a great variety of stitches in their sewing, and those of Unalaska have always been noted for skill in the beauty of their sewing. No murder has been committed among the Aleuts for the last fifty-two years, and when the last occurred the whole race was horror-struck."—*Davies*.

The christian inhabitants of Alaska, docile, kind and hospitable, expert in mechanism and skillful in maritime adventure, possessing sufficient intelligence and self-pride, and in every respect worthy to enjoy "life, liberty and the pursuit of happiness," became citizens of our Great Republic by no act of theirs. By a dash of the pen they were guaranteed all the rights, privileges and immunities of *American citizens* in the terms of the treaty of March 30, 1867, as follows: "The inhabitants of the ceded territory, according to their choice, reserving their natural allegiance, may return to Russia within three years; but if they should prefer to remain in the ceded territory, they (with the exception of the uncivilized native tribes) shall be admitted to the enjoyment of all the rights, advantages and immunities of citizens of the United States, and shall be maintained and protected in the free enjoyment of their liberty, property and religion. The uncivilized tribes will be subject to such laws and regulations as the United States may from time to time adopt in regard to aboriginal tribes of the country."

Notwithstanding the explicit assurances of the treaty, the

people of Alaska have only "jumped out of the frying-pan into the fire." From the day in which they were officially transferred to our protection they have groined under the weight of martial law, as administered by military Breasts. President Grant has sent a powerful Armada to the island of San Domingo, and has lavished untold treasures on the savage negroes there, and is still battling against an irrevocable decree of nature in his vain efforts to elevate the "outside barbarians" to the lofty dignity of American citizenship. If the President is so very earnest to promote the denizens of other lands to the enjoyment of our national freedom and happiness, then we humbly submit that the Presidential charities should begin nearer home. Our own fellow-citizens in Alaska are ground down "in the bonds of iniquity," and we do know that those helpless people, too long held "in the gall of bitterness," are patiently waiting for "the good time coming," in which, under theegis of civil government, they may enjoy the products of their own labor in security. Fifty thousand Christians in our newly acquired territory, longing for the enjoyment of our rights and privileges, are fondly clasping for their just inheritance which the plighted faith of our government has promised to them. Congress has been faithless to those people, and it is high time that humane laws should be enacted for their protection; they are eminently worthy of all the favors conferred by the treaty; the development of the vast resources of that great territory, the successful prosecution of the fisheries, and the commerce already inaugurated, demands the protection of Admiralty courts and kindred institutions to regulate the trade and exchange among the industrious people in our new domain. We earnestly hope our government will now extend some protection and dispense justice to the people of Alaska.

The rich territory of Louisiana was a valuable acquisition to our whole country, particularly to the agricultural interest; the annexation of California was also opportune and of immense value to our metallic circulation. The statesmen who consummated these patriotic measures were, in their respective periods, libelled and traduced. "Time, that spares no lenient hand," has clearly demonstrated the wisdom of those sages in acquiring those territories. The purchase of the great territory of Alaska forms a wise step in the right direction; the boundless waters washing that continent teeming with imperishable wealth, affords

an immense nursery for rearing a grand commerce on the north-west coast. The venerable statesman who has accomplished that grand consummation, has also in his turn been one of the "best abused men in America," but "Time, that makes all things even," has already proved the immense value of "Time's noblest offspring." The illustrious secretary has been spared to see with his own eyes the rich domain which his energy and patriotism acquired; he has left his footprints on the north-west coast, where his praises will be chanted by unborn generations as "one of the few, the immortal names, not born to die." In acquiring Alaska we obtained the key to Behring sea and the Arctic ocean, with all the rich treasures reveling in those waters. We have, in addition, gained a permanent footing in eastern Asia, and opened the unlimited resources around those shores to our industry.

Siberia, extending from the parallel of 50° to 70° north, with its sounds, gulfs, bays and coves, draining large rivers, and fringed with the Saghalien, Kurile, Copper, Behring and other islands, besides the unexplored coast extending from East Cape northwestward, is now opened to American enterprise. Those shores, washed with the warm stream from Japan, having a high thermal temperature, teem with cod, salmon, otter, seal, walrus and great whales. The coast margining these waters is reported rich in minerals—diamonds, gold, silver and the baser metals. Furs are abundant, some of which are very fine and valuable. Siberian sables are trapped on that coast, and commands fabulous prices; ermine and other fine furs are also obtained. The most favored cod grounds are located between the parallels of 52° and 55° north, where very solid fish are taken; vessels from San Francisco make annual trips to those waters with profitable results. Silver salmon are found abundantly in the rivers; cattle, pigs, dogs and wild beasts take them for food; they are lean and poor, owing to the warmth of the water. Seals congregate along the coast, some favored rookeries being found among the Kurile islands, to which the seal hunters resort annually. This coast has, from time immemorial, been a most genial resort for the walrus; they are taken in great numbers by the whalers, and also by the Esquimaux for food. "When Kotzebue was at anchor on the north side of East Cape, thousands of walrus played around his ship and roared like oxen; among them appeared several whales."—Davidson.

The warm current running continually northward through Behring strait carries the ice-fields away, and affords clear scope to the whalers. The shoalness of the Arctic, the mildness of the climate, and the 'blessed power of sunshine,' facilitates the capture and cutting in of the huge fat whales. Good fares have been obtained late in the month of October as high as the 73°. This fact demonstrates the genial temperature prevailing in those regions. "Barque 'Helen Snow,' Capt. Campbell, reports:—Left Japan, April 14th, made the ice 8th of May, lat. 60° 10 north, lon. 116° east; took first whale 17th of August; the last, Oct. 2d, lat. 70° 50 north, lon. 163° 40 west; Oct. 4th, kept off for the strait."—*Hav. Gazette*, Nov. 9, 1870.

"The Kamachatka current after passing through Behring Strait inclines toward the coast of America, as is fully proved by the existence of driftwood along the shores and in the waters of the current, while little or none is found on the Asiatic coast or in the waters adjacent. We have this season conversed with whaling captains who left the Arctic as late as Oct. 12th, and their experience of years confirms the above statements. This current passes through Behring Strait with a velocity. . . . Moreover, the interesting fact may be stated that there has rarely been such an open season in the Arctic as that just passed. Capt. Williams went as far westward as 166°, and had nothing but open sea before him. Capt. Thomas went as far as 72° 55."—*Davidson*.

Population. Two hundred years ago all that region watered by the Amoor river was Tartar in every respect, today it is Russian. The population is mainly composed of criminal convicts or political exiles, some of whom are of noble birth, all banished from the western dominions of the Czar; many arose from the lowest servitude in the mines, and by industry and sobriety have become proprietors of large tracts of land and considerable wealth. This element, though basking in affluence, seldom obtains the imperial pardon or leave to visit their native country. A very large majority of these exiles never hope or even look for the privilege of leaving those regions; they are compelled to waste their sweetness on the frigid air of that country, unless they take "French leave" and pass over the steppes of Asia among the Tartars, who are hospitable to the exiles and usually welcome them to their country. Many of the political exiles are at liberty to labor at any vocation, and to

subsist as they may deem proper. This class forms the bone and sinew in Siberia; they have consummated nearly all the development in that country, and have obtained valuable franchises through friends at St. Petersburg to work the rich mines; large fortunes have thus been acquired. This vast coast, rich in minerals and other resources, far from the Russian capital, beyond the power of the imperial government, and within the influence of our country, with a population nurtured in liberal ideas and cultivating higher aspirations for freedom, this romantic domain, with its liberty-loving exiles, long buried in despotic darkness, are now casting longing looks and affectionate glances across the sea towards our great Republic. A vast trade from San Francisco has been inaugurated there; about a hundred American vessels fish in those waters and trade in the harbors; our canvas whitens the seas, sounds, bays and coves, and the stars and stripes may be seen in every creek and cove, reviving the hopes and stimulating broader and higher emulation among the "exiles of Siberia."

Temperature. The temperature of the waters bathing the shores of Siberia is much warmer than on the coast of Alaska on corresponding parallels. The currents are regular, and their directions and strength are reliably ascertained; the needle moves with gradual motion; the variation is extremely high, being 30° in some localities; barometer, thermometer and chronometer perform their respective functions regularly, and enjoy the confidence of navigators. The winds in those seas prevail in the summer and autumn very regular from the southwest; during the winter months southeast winds with rain are experienced; cold snaps are invariably accompanied with north and westerly winds. The north-easterly gales are disagreeable, being in most cases tempered with snow and sleet. Hurricanes are seldom met; the winds when free from mountain influence are steady, tempests are seldom experienced, and little damage to vessels is recorded from this element; the waves are of moderate elevation, and run with regularity. Mountain swells are unknown, and the wear of vessels is much less than in the western ocean. The loss of vessels employed in the whaling and salt fishing around the northwest coast for the past five years, are few; two of the cod fleet are missing, while half a dozen of the whaling vessels have been crushed by the action of the ice, the heroic masters of those ships choosing to remain late in

these waters under the stimulating temptation of the great rich whale reveling in those seas. The premium on marine risks is much lower than on any other coast; the ocean tides are subject to great variations, and in Cook's Inlet, which resembles the Bay of Fundy in many physical aspects, the Spring tides ebb and flow nearly forty feet. This physical arrangement affords timely opportunities for repairing, cleaning and painting vessels.

Salt. The great Pacific Ocean, though much colder than the Atlantic, yet contains strong saline properties. The waters washing the southern coast of California are prolific in salt, vast quantities are gathered on the islands in the Santa Barbara channel. The rocky ledges margining those islands are covered with strong salt formed by solar evaporation; the people residing along those shores gather up sufficient quantities yearly to satisfy their domestic wants. The lagoons fringing the bay of San Francisco produce considerable salt, which is diluted with lime and alkali. The waters of Puget Sound, though constantly tempered with fresh streams from the mountains, yield clean salt; the writer manufactured some by solar evaporation, and produced a pure white article. The cheapness of lumber, the low, level sandspits and clear, bracing north-west winds in that sunny valley renders the manufacture of salt a paying industry. On our recent journey from the Pacific we examined several samples of salt made from the waters of Salt Lake in Utah. The dryness of the atmosphere and the powerful heat of the sun's rays in that region, fringes the lake shores with large quantities of salt. The samples exhibited to us were white, clean and sweet, and resembled Cadiz salt. This valuable article has been subjected to severe chemical tests at Vassar College, New York, and, as compared with the celebrated salt from Turk's Island, presents the following results:

TURK'S ISLAND.		SALT LAKE.	
Pure Salt, or Chlo. of Sodium,	98.76	Pure Salt, or Chlo. of Sodium,	97.76
Chlo. of Magnesia,	.14	Chlo. of Magnesia,	.09
Sulphate of Magnesia,	.64	Sulphate of Magnesia,	.05
" Lime,	1.56	" Lime,	1.03
Water,	.96	Water,	1.23

This scientific analysis establishes the superiority of the Salt Lake salt; it may be produced by natural process to any extent. This is by far the best article we have seen in any country, and we do most earnestly recommend the manufacture of it to prac-

tical men of means and experience. Mr. Mitchell, at Salt Lake city, has cured and barreled this salt for several years past; we bespeak good returns for his labor. The fishermen along the north-west coast will, in future years, consume vast quantities of this superior salt, and we anticipate great and profitable development in this valuable branch of our Pacific industry.

Curing Fish. The sunny atmosphere and clear trade winds on the northwest coast are equally effective in drying fish. In the vicinity of the Golden Gate the climate is subject to great changes. During the Summer and Autumn months the warm balmy mornings are usually succeeded by damp, chilly evenings, often aggravated by dense fogs. The extremes in climate renders the drying of cod very tedious. At Salcelleto we noticed several crews engaged in curing their fares. From them we learned that it required as much time to cure cod in the Bay of San Francisco, as it did to catch the cargo at sea. From careful observations we conclude that the Bay of San Francisco is not adapted to curing cod or halibut. The level shores margining Puget Sound offer every facility for drying fish,—the temperate rays of the sun, the clear, bracing winds prevailing in that valley from May till November, the thermal temperature of the coast, regulated by the stream from Asia, combined with other natural causes, renders those shores the most available base for developing the fishing industry. The southern shores of Alaska, as before stated, are lofty and rugged, and subject to heavy rains. The broad alluvial plateau bordering on the eastern shores of Cook's Inlet enjoys a bracing climate for several months in each year. Fish may be cured in that locality in autumn with certainty. The islands fringing the peninsula of Alaska and some of the Aleutian islands afford facilities for drying and curing all kinds of fish. Various other localities on this vast coast are well adapted, which the practical fishermen in future years will make subservient to their necessities. The gifts so lavishly strewn around these shores will, in the fulness of time, be made to contribute to the nurture and comfort of man.

Cooperage has heretofore ruled high on the northwest coast, the demand for spirit, wine, beer and oil casks taxed the energies of the coopers to their utmost, and they have realized exorbitant prices. The steam factory in San Francisco supplies ev-

ery demand at reasonable figures—fair, tight barrels, iron-hooped, being obtained at that establishment for one dollar in coin. White spruce, found on the coast, affords good material for staves and headings. Oak, locust, hazel, and other saplings abound; thus coopering materials are found in sufficient quantities convenient to navigation.

Groceries. The Sandwich Islands, so near our states and territories on the Pacific, produce sugar, syrup, coffee, salt, and other products of prime necessity. For nearly a century those islands have been favored resorts to American vessels, particularly to those engaged in trading on the northwest coast, or whaling. The benefits lavished by our citizens on the natives have been appreciated, and a strong attachment to our people is general among the islanders. The discovery of gold in California and the rush to the mines have stimulated our relations with those people, and our commercial intercourse with them has increased, and is yearly becoming greater. So mutual has our affairs become that the hope is justified that in a few years those islands will form an important division of our country. A treaty of reciprocity in trade between our country and the Sandwich Islands still pends the action of our national legislature. The consummation of this just measure is earnestly hoped for at an early day. The admission of Sandwich Islands produce, free of duties, will enable the fishermen on the northwest coast to obtain salt and groceries cheaper than on the Atlantic coast. Nearly all the leading articles, whether of fuel or food—wood, coal, pork, beef, flour, bread or lard, are cheaper than the same articles can be purchased in the markets of New England.

Markets. The markets for Pacific fish are already extensive, and yearly increasing. The Spanish Republics of Mexico, Central and South America, the Sandwich Islands, Australia, China and Japan have for several years taken our salmon, and the demand is largely on the increase. About 1,000,000 of hearty Anglo-Americans, Germans, and other nationalities are permanently domiciled in our states and territories on the Pacific slope. The trans-continental railroads have opened the valleys of the Platte, Missouri and Mississippi, all densely settled with hard-working farmers. The completion of the North Pacific Railroad from Puget Sound to Lake Superior, over a fertile bench of country, fast filling up with yeomanry, those

broad avenues will open a vast and profitable market to our fishermen, where the sweet fish of our cold waters will be largely consumed. The Northern Pacific Railroad will enable our fishermen to send the products of the seas—oil, bone, ivory, pelts and furs by the way of the Canadian canals, and connecting with ocean steamships on the St. Lawrence to Europe. Our salmon will be shipped to every market in North America and Western Europe. On our fishermen devolves the grand duty of furnishing this fish at such prices as will place it within the reach of all.

The merchants along the northwest coast have engaged in developing the resources of Alaska and Siberia with good results. Nearly two hundred vessels have entered those waters the present season in quest of cod, salmon, otter, seal, walrus, whale and other products. From the most reliable data at hand we estimate the value of the products from those regions for the present year will approach five millions of dollars in coin. In view of our unlimited shores, genial climate, extensive fishing grounds, teeming with the treasures of the deep, forests primeval—cedars, spruce, fir and hemlock; our untold facilities for shipbuilding; minerals—coal, iron, copper, silver, gold and diamonds; furs—otter, seal, walrus, fox, marten, deer, wolf, bear, panther, ermine and sable—all accessible to safe harbors, laved with the warm stream from the Indies, tempering the winds to the shorn lamb, abating the wear and exposure of men and vessels. In view of the prolific wealth here latent, the broad inviting fields now open, what rich avenues are here for the energetic young men of our country? What broad channels are opened to the American fishermen of nerve and cash. In a desire to compress our theme, we have passed over several items incident to our subject. We now propose to demonstrate our preference for the most available locality for developing the resources of the northwest coast, in—

A PLEA FOR PUGET SOUND.

Previous to the acquisition of Alaska, Washington Territory formed the northwestern angle of our country; it is now the central focus of our possessions on the Pacific slope. This region is bounded on the north by British Columbia, on the east by Idaho, on the south by Oregon, and on the west by the Pa-

cific Ocean, the Strait de Fuca and the Gulf of Georgia; it contains about 70,000 square miles in area.

Topography. The topography of this region presents romantic scenery, lofty, snow-clad mountains, broken hills, green valleys, bleak prairies and verdant marshes. The range of mountains traversing the Pacific slope, known as the Sierra Nevadas, extend through this territory on a north and westerly course and assume the name of Cascades, from the numerous streams issuing from and pouring down the gorges in that range. These mountains form a continuous divide, through which some abrupt chasms are found; high, frosted domes, soaring up, are visible. Baker, Ranier, St. Helen's and Adams' attain lofty altitudes; Mount Hood boasts the highest elevation. The Olympic or coast range, runs parallel with the shore; this lofty crest rears high in the region of clouds, a self-sustaining beacon, affording a reliable land-mark to mariners. In October, 1870, we had a plain view of this mountain from the Barque "Scotland," Capt. McLellan estimating his vessel 100 miles distant. "The river of the west" drains this territory; it pursues a meandering course from the north, and finally to the west, and forms a portion of the southern boundary. The broad valley, sandwiched between the Cascades on the east, and the Olympic mountains on the west, forms the plateau margining the Mediterranean of the north-west coast, known by the general name of

Puget Sound. This deep blue sea extends from Cape Flattery, the north-west angle of the territory, and pursues an easterly course for nearly eighty miles; thence in a south-eastern direction for about sixty miles to the Narrows, and flows to the southward for nearly thirty miles to the falls of Tumwater, the head of navigation. Mr. James Lawson of the coast survey, has carefully computed the shore line as follows:

Strait de Fuca, - - - - -	161 miles.
Rosario Strait, Canal de Haro and the	
Gulf of Georgia, - - - - -	627 "
Admiralty Inlet, - - - - -	324 "
Puget Sound proper, - - - - -	280 "
Hood's Canal, - - - - -	192 "
Total shore line, - - - - -	1594 "

Climate. The climate of this valley varies in different sec-

tions, and the temperature is much higher than that of corresponding parallels on the Atlantic slope; it is similar to that of the British islands. The warm stream from the Indies spends its force in those regions. This great current, originating in the warm waters of the tropics, rushing to the northward, bathing the shores of eastern Asia, crossing the north Pacific, leaving the southern shores of the Aleutian islands, the peninsula of Alaska, the Kadiak bend and Sitka bight, wastes its strength on the coast of British Columbia, and finally subsides in the valley of Puget Sound. The winds from the westward accompanying this warm current, absorb its thermal qualities, fans our shores, rushes through the Cascades, lights upon the basin of the Columbia, dissolves mountain snows and valley frosts, stimulates vegetation and makes the passes of the Rocky Mountains, even in the winter season, the chosen pastures for the buffalo and grass-feeding animals from the frigid regions in the south.

In another portion of this work we stated some of the most prominent indications arising from the westerly winds in the eastern division of Washington Territory and in British Columbia. The same agencies are ever manifest along the Puget Sound valley. We claim a more genial climate and a higher temperature than prevailing along the shores of Oregon and Northern California. In the severe seasons of the most rigid winter months thousands of cattle and sheep have perished in those States. We have not witnessed any heavy losses in stock from cold or hunger during our sojourn of ten years in the Puget Sound country. "The climate of western Washington differs essentially from that experienced east of the Cascade mountains.

. . . Properly speaking there are but two seasons on the borders of Puget Sound — the rainy and the dry. The grades of temperature and the accompaniment, which in other countries on the same latitude ascribe the features and title to the four seasons — spring, summer, autumn and winter, are here in a great measure obliterated, or at least so dimly marked that the seasons imperceptibly run into each other and lose their distinctive line of division. It is not unusual for the three winter months to be mild, without snow or ice, the grass growing meanwhile. In February the weather may occur mild and genial as May, to be succeeded in March or April with colder weather. The maximum temperature of some days in July and August will reach 90° or 100°, sometimes followed by cold nights.

The rainy season proper begins late in October or early in November, and may be said to continue till the ensuing April. It frequently happens, after the first rains, that weeks of weather similar to Indian summer occur, and it is seldom that one or other of the months of January, February or March does not prove continually mild and clear. The summers of this territory are unsurpassed in the world. In the winter months, six in number, rains prevail. No disappointment should be felt if falling weather occurred in some part of the twenty-four hours, yet many bright sunshiny days relieve the long continued rainy season of Washington Territory. Of the sixteen winters passed in this territory, the writer has known but three so severe as to render it essential to house and feed stock. . . . Rose bushes generally have proved an evergreen, and during the winter of 1860-61, the *hermosa* continued in bloom in the garden of the writer till the twenty-fifth of January. . . . An average of from seven to ten days of freezing weather may be looked for with a moderate certainty, when ice may be formed sufficiently thick to bear a man's weight. Under most favoring circumstances a small pond, entirely protected from the wind, may be frozen thick enough to permit a day or two of skating to a limited number of persons. Parties fond of sleighing consider themselves especially favored if they are afforded a season of from three days to a week's duration." — *Evans*.

Deeming this subject worthy of general circulation, we quote some items from the local press, touching the mildness of our climate and its effects on vegetation. The *Seattle (W. T.) tri-weekly Intelligencer* of Nov. 28, 1870, says: "Thanksgiving passed off very quietly in this city, with the exception of the Methodist church, where a respectable audience assembled, and the services were of an interesting character. The Reverends J. F. Damon and S. H. Mann officiating. . . . Near the reverend gentlemen, and in full view of the audience, was very tastefully arranged upon the stand, a fine display of flowers, fruit and vegetable productions, gathered on that day from the gardens of the city, consisting of a variety of roses, violets, daisies, honeysuckles, chrysanthemums, bluebells, snapdragon, hollyhocks, marigold, princess feather, mullen-pink, new oats, white and red clover, ragged robins, ripe and in blossom, and young grapes — second crop, to which Mr. Damon alluded by way of supplement in his discourse, in a happy manner, referring

as he did to those extraordinary evidences of our genial climate and productive soil."

We also take the following from the Olympia (W. T.) Transcript, of Jan. 15th, 1870:—"On Monday last Mr. H. B. Woodward, of West Olympia, sent into this office a bouquet of flowers, containing twenty-two varieties, gathered from his open garden on that morning, Jan. 10th, 1870. Among them we noticed the following summer varieties:—the myrtle, marigold, daisy, roses, several varieties, flowering cabbage, wallflower, shellflower, honeysuckle, chrysanthemums, chamomile, etc. If any other place on the globe in 47°, north latitude, can produce such a selection of flowers, twenty-two different kinds, on a space of less than half a town lot, in the open air, on the east and north side of the house, and fully exposed to the north, northeast and east winds, let it speak out and tell its story. Mr. Woodward's is not the only garden in which flowers are to be found. There are many of them. In our own little garden we find in full bloom a number of carnation pinks. Who can beat Olympia?"

Rivers. Many streams rush down the mountains, penetrating the plains to the sound, several of which are deep, draining rich farming lands. The largest are the Nootsack, Lummi, Swinimish, Skagit, Stillaquamish, Skykomish, Snohomish, Cedar, White, Dwamish, Puqallup, Nisqually and the Des Chutes. The rich bottoms bordering on these rivers, the broad bench lands fringing the mountains, and the level prairies margining the head waters of the sound afford ample fields for all branches of husbandry.

Hon. Wm. Pickering, late Governor of Washington Territory, in his official message to the territorial legislature, submitted the following information to the "assembled wisdom:" "The large extent or aggregate amount of rich soil well adapted for agricultural purposes, located in the western half of this territory, is not generally known even to our own citizens, for many parts remain undeveloped, and are rarely visited by white men. Let me invite your attention to a few statistical facts regarding it, the most of which, from personal observation, I know to be true, and the remainder I have from the most reliable sources. Beginning at the northern boundary and coming south along the meandering of the coast and Puget Sound, the Nootsack river has rich lands on both sides for 30 miles, Lummi 6, Samish 20,

Skagit 50, Stulaquamish 25, Snohomish 20, Skykomish 40, Snoqualmie 40, the prairie and pass 20, Cedar river 25, the rich lands lately discovered between the Cedar and Snoqualmie rivers 50, White river and branches 40, streams emptying into Washington and Squak lakes 20, Dwamish river 12, Puyallup 20, Nisqually 55, Des-Chutes 20, Chehalas 70, Wynnahia, Set-sop, Black rivers and lake 60, Skookumchuck and tributaries 65, Johnson's river, Umtulah, Whisk-kah and other tributaries of Gray's harbor 55, North river, Willapo and other tributaries of Shoal water bay 35, Columbia river 100, Cowlitz 65, East fork 20, Lewis and its forks 30, Washugal 10, Salmon river 20, on the Pacific coast, Quenalt, Raft, Ohaklet, Quelliboutes and other streams 90, Okeko, Clalm, Fisk, Elwa, Dungeness, Squimbay and Port Discovery 80, Chimicum and branches 30, tributaries of Hood's canal 100; making in all 1318 miles of rich bottom lands, ranging from two to five miles in width, together with numerous small creeks with equally rich soil on their banks, averaging about a mile in width, making about 400 miles in length, altogether sufficient to furnish upwards of 30,000 farming families with 160 acres each. And in addition to all this there are innumerable tracts of good farming soil upon the table lands."

We endorse this estimate as reliable. Governor Pickering is an experienced farmer from the state of Illinois, and his opinions are worthy of respect. Hon. S. Garfield, the present delegate in Congress from Washington Territory, and former Surveyor-General of that domain, whose opportunities were good in observing the farming resources, says: "The valleys of the mountain streams which come from the mountains and empty into the Columbia and Puget Sound, or discharge their water directly into the ocean through Shoalwater bay and Gray's harbor, are very rich, and sufficiently numerous and extensive to furnish homes and farms for a large population: the uplands are either composed of clay or gravel. . . . There are also in this region extensive tide-flats easily reducible to a state of cultivation and inexhaustable fertility."

The extent and capacity of our farming lands is ample; farmers from the north and eastern states are pleased with our soil, and are gathering profitable returns. With the means employed for tillage and raising fruit, the products of our lands are gratifying.

"The mildness and humidity of the climate produces some very singular results upon vegetation; often potatoes, cabbages and other vegetables are harvested only as fast as they are required for family use. The cabbage stalks from which the heads have been cut remain standing in the garden, and often produce during the following season from three to seven heads of cabbage to each stalk, hard, sound, excellent, but not as large as the first head produced. Where the soil is good the production is abundant, and that too with moderate tillage. I have seen potatoes dropped upon the unplowed ground, covered with a shovel-plough, and left until digging time without further cultivation. They were then harvested by ploughing them up and thus bringing them to the surface, and the yield with this primitive culture ranged from 500 to 700 bushels to the acre. . . . There are portions of the United States possessed of soil more uniformly good than that of Washington Territory. But for variety and extent of resources, perhaps no part of the Union equals it. Agriculture and stock-raising are but two and perhaps not the most important of its elements of wealth and prosperity. The agricultural and grazing capabilities of the country can yet scarcely be estimated. The population is so sparse, the process of culture so simple, and the necessity for husbanding and applying fertilizers so light, that but little can yet be determined in regard to the cultivable or grassing area of the country, or the possible capacity of giving areas for production. That fruits, flour, beef, mutton, oats, wool, barley, potatoes and other inferior products may be produced for exportation in immense quantities, no one residing in the country seems to doubt. The winters are much milder and shorter than upon the Atlantic seaboard, so that comparatively little of the products of the summer are consumed during that continuance, leaving a much larger portion for sale and exportation. In many sections of the country no provision is made for sheltering or feeding stock during the inclement weather; still, however, the more prudent of our people generally provide for a short period of frost and snow, which is likely to occur in two or three years." — *Garfield*.

In an earnest desire to give every information relative to our mild, genial temperature, and its effect on vegetation and human health, we append the following exhibit from the United States Coast Survey for the winter of 1866-67:

Nov. 1897.	Clear days, 1.	Rainy days, 92.	Foggy days, 2.	Rainfall, 3.00 inches
Dec. "	" 3.	" 25.	" 2.	" 2.800 "
Jan. 1897.	" 7.	" 12.	" 2.	" 7.500 "
Feb. "	" 2.	" 24.	" 2.	" 5.197 "
Mar. "	" 22.	" 2.	" 1.	" 0.200 "
Apr. "	" 22.	" 4.	" 0.	" 2.371 "

Total rainfall, 34.100 inches

This demonstrates a genial climate; we have a large average of clear days, sufficient rains and little or no fogs.

Geology. No thorough geological survey has taken place, consequently little reliable information can be given touching the mineral resources of Washington Territory. The existence of valuable metals are manifest, and copper, silver and gold have been found in various places; coal croppings are visible all over our valley, which fortifies the belief that the whole plateau of Puget Sound is an inexhaustible bed of coal; several leads are being developed in localities convenient to navigation. A rich mine in the vicinity of Elliot bay, on the eastern shore, is now in process of development. This article burns clear, leaving no clinkers, and is well adapted to steaming purposes; it has been chemically analyzed as follows:

Carbon,	- - - - -	57.24.
Hydrogen,	- - - - -	2.00.
Nitrogen,	- - - - -	7.50.
Oxygen,	- - - - -	16.00.
Sulphur,	- - - - -	2.00.
Ashes,	- - - - -	8.00.
Water,	- - - - -	9.00.
Specific gravity,	- - - - -	1.300.

Practical engineers, who have used this coal on steamers, say that "it kindles quick, burns clear, leaving no clinkers and emitting a powerful heat." Near the northern boundary in Bellingham bay, a mine has been worked for several years with apparent success. This lead has been traced back for several miles with indications of indefinite limits; it has been delved for nearly 1000 feet. This coal is bituminous, burns freely; and is largely consumed in domestic purposes. Chemically, it yields the following results:

Specific gravity,	- - - - -	1.309.
Water, (Hygroscopic),	- - - - -	5.60.
Dry Coal,	- - - - -	94.40.
Carbon,	- - - - -	74.41.
Hydrogen,	- - - - -	4.63.
Oxygen, nitrogen and sulphur,	- - - - -	17.61.
Ashes — red,	- - - - -	3.35.

This mine is extensively worked, about fifteen tons being hourly delivered on shipboard.

"The mineral resources of Washington Territory are already known to be considerable; coal, iron, copper, lead, gold and silver are known to exist. Puget Sound valley is the great coal basin of the Pacific, coal having already been discovered in large quantities in divers localities, and of better quality than elsewhere upon that coast. The value of these coal deposits, and their influence upon the future manufactures and the internal and external commerce of the Pacific slope, cannot yet be fully appreciated. All will concede that they are powerful elements of ultimate wealth and prosperity." — *Garfield*.

The "forests primeval" fringing Puget Sound have obtained celebrity. The cedars and fir trees nurtured in those regions are "tall and majestic." The most powerful nations of the earth obtain spars for their war vessels on our shores. Much of this timber is manufactured and exported; vast quantities are used in San Francisco in constructing buildings, wharves and other structures; it is generally used in repairing and building water craft, for which it is well adapted. "The timber which covers a large proportion of the surface of western Washington, constitutes a present and increasing element of wealth and prosperity. The most valuable kinds are fir, cedar, pine and maple. No one, whose experience and observation has been confined to the Atlantic slope of the continent, can form any conception of the magnificence of our forests, remarkable alike for their extent, size of the trees, and the number standing within a given area. The fir predominates over all others in size, number and usefulness. Fir trees, six, seven and eight feet in diameter, and more than 300 feet high are not uncommon. These, however, are too large to be cut into lumber profitably. The size preferred by mill-men is from thirty to forty inches in diameter; trees of this size usually afford from 70 to 200 feet in length of trunk, free from limbs or damaged parts. The cedar attains a diameter equal to the fir, but is not usually so tall; pines and oaks are much smaller. Land affording 30,000 feet of lumber to the acre is considered hardly worth cutting over; forests yielding 100,000 feet and upwards to the acre are common." — *Garfield*.

Water-power. The mountain ranges on both sides of the sound usher forth several torrents, which, in rushing through rocky gulches, afford plenty water-power. The Des-Chutes

river, at the head of the sound, falls over a level ridge, affording sufficient power to move all the mills in Lowell; other falls are latent along our shores convenient to navigation; "other men in other times" will harness these mighty agencies, and make them subservient to the wants of man.

Indians. The ramifications of waters penetrating this valley, the arms and peninsulas dividing this sea, the dense forests fringing the secluded havens quickened with elk, deer and bear, the trees alive with pheasants, grouse and pigeons; the broad, level prairies, dotted with mirror lakes—genial resorts for geese, ducks and swans; the water courses teeming with trout, perch and smelt, while the silvery arms of the sound afford cod, halibut and salmon, and even the mud-flats fairly boil over with oysters, clams and other shell-fish. A country thus teeming with spontaneous luxuries afforded an earthly paradise to the red man, who, for centuries held sway, "monarch of all he surveyed" in this romantic domain, faring sumptuously on oil and blubber. In this thermal land, rich in roots, and covered with berries, "the poor Indian" idled away his time; "he toiled not, neither did he spin," yet, Solomon in his temple was not greater than the "Duke of York"—the Chief of the Clalms, on Puget Sound. From the early traders and missionaries we learn that the Indians have dwelt in great numbers around this calm sea, but their numbers are "growing small by degrees and beautifully less." The extinction of the Indian in our territory is simply a question of time. Our government has treated them with commendable kindness; large, fertile tracts of land have been specifically reserved to them; churches and schools have been reared for their benefit, and healthy progress is manifest among the remnant surviving. Our Indians display some mechanical talent; they dig out beautiful canoes, which in lines, symmetry and shear cannot be excelled. They are expert "by flood and field," either in trapping the coarser fur animals on the land, or the fine otter on the sea. The rich furs, so abundant, enticed the early traders to this coast; the Spanish were the first in the field. In 1792 they built a trading fort at Necha bay, (the bricks of which are still visible), in the midst of the most energetic and desperate savages on that coast. The Hudson's Bay Company from London, established a trading depot at Nisqually in 1830; clergymen representing different denominations of christians soon followed. In 1841 the United States

exploring expedition, under command of Lieut. Wilkes, visited Puget Sound and remained there several months, during which time the principal channels and harbors were surveyed.

"After the commencement of the present century there is no record of further operations within those waters until the establishment, in 1883, of fort Nisqually, near the head of Puget Sound, by the Hudson's Bay Company. In 1839, Father Demers, one of the two pioneer Catholic missionaries to Oregon, visited and labored among the native Indian tribes of Puget Sound. In succeeding years he and others of the same faith continued those visitations; no permanent establishments were attempted, but here they planted the sign of the cross at various points, and sought to mollify the asperities of heathen barbarity, paving the way for the white race peacefully to occupy those regions. At an early day the fruits of those zealous missionaries can find its illustration on Whitby island, by the Indians erecting a large house, dedicated and devoted to the worship of the living God. In 1840, Rev. J. P. Richmond, of the Oregon Methodist Mission, located at Nisqually. During 1841, the United States exploring expedition, Capt. Charles Wilkes commanding, spent the summer in exploring and surveying these waters. . . . But hitherto no attempt had been made to establish American settlements in the Puget Sound country."

— *Evans.*

The vast country on the Pacific slope between 42° and 54° 40' north, was, by the terms of the treaty of 1827, held in joint occupancy by the subjects of Great Britain and the citizens of the United States. Several bodies of emigrants, principally Americans from the western States, had previously "crossed the plains" and settled in the valley of the Wallamet. This humble germ, "sown in weakness," has been "raised in power." The Hudson's Bay Company held possession of the country north of the lower Columbia river, with their chief entrepot at the romantic town of Vancouver; they had also a chain of trading forts across the Puget Sound valley, even far into British Columbia. The diplomatic struggle was then raging for this "vale of paradise." The British government made an earnest effort to secure the free navigation of the Columbia river, ostensibly in the behest of the Hudson's Bay Company, but really for the absorption of Washington Territory. Mr. Webster, Secretary of State, conducted the negotiations, favor-

ing the proposition in consideration of larger privileges being extended to the New England fishermen in the waters bordering the maritime provinces in British America. Whilst the diplomats feasted and regaled their boon companions over "the good time coming," a few hardy pioneers from the Wallamet "crossed the Rubicon," and entered the promised land on Puget Sound. "They came, they saw, they conquered," and laid deep the foundations of the future State of Washington:

"Those pioneers, God bless their memories, were living witnesses to the integrity of American claim to this territory. . . . Each in proper person bore testimony that the voyage of De Fuca, the labors and discoveries of Gray and Kendricks in the 'Columbia' and 'Washington,' should not pass for nought. After they had threaded their wearisome way to the Columbia, occupying the whole season, yet the pioneers to Puget Sound were ready, at the opening of the next season, to renew their journey and carry northward to these shores their families and their household gods." — *Evans*.

After toils and privations, the early pioneers founded an imperishable civilization in the sunset land, in accomplishing which many of them "fell by the wayside," some, through savage perfidy, suffered "many deaths," some perished by flood in the frail canims, while seeking the needs of life, and others died in humble cabins. "Heaven's register alone contains the record; humble was their lot, unheralded and modest as was their labors, unmissed though they departed from this scene, yet the world received benefit by their having lived in it. Here and there deserted cabins silently attest what these heroic, self-sacrificing men undertook. What risks the pioneers incur; these lost of earth are entitled to gratitude; their labors and their loss hallow the past of Puget Sound, teach us more thoroughly to appreciate the *Present*, and remind us of our duty to those who in time succeed us." Such is the pen-picture of our early settlers, drawn by Hon. Elwood Evans, himself an early pioneer to our territory, and a prominent "hero in the strife."

From humble beginnings small colonies became stronger, annually replenished by streams of determined emigrants seeking homes and a country in the region of the setting sun. Those heroic patriots, reared under the drippings of Freedom's sanctuary, immediately implored Congress to extend self-government to them, which was organized in 1853, with the classic name of

'Washington,' which we still enjoy. "Our people wanted to call it Columbia. No other designation was suggested, and it is a singular coincidence that the names of the two American vessels which first plowed those waters should have been the only names deemed as appropriate for the new territory." — *Evans*.

President Pierce entrusted the execution of the organization to Major I. I. Stevens, our first governor. This officer graduated at West Point with high prestige; in the Mexican war he won and received commendable appreciation from the commanding general; he devoted his active energies to our young territory and set the paraphernalia of government in successful operation; he afterwards represented our territory for two seasons in Congress. In the war of the rebellion he commanded a brigade in the Union army, and on the deadly field of Chantilly, Virginia, in August, 1862, he fell, much to the regret of our early pioneers, among whom his memory is held in pleasant remembrance. The legislature has organized our territory, and divided it into counties and judicial districts; life and property are protected and the laws are humanely executed and generally obeyed.

Towns and Cities. Our hardy pioneers, having reclaimed this domain from the savages, and having great faith in its future destiny as the prospective gate to the Indies, have laid out and are building up towns and cities on the margin of the Sound, which bask in the sunshine of steady, healthy progress. We present the claims of several to the favorable attention of our readers, in the earnest hope that many will be induced to locate in our embryo cities.

Port Townsend is situated at the junction of the Strait De Fuca and Admiralty Inlet. The present business part of the town is built on a low beach, immediately adjoining which is an abrupt bluff; upon this elevation is found the residences of the citizens, the marine hospital, churches, school-houses, etc. The custom-house for the Puget Sound district is located upon the beach below, hence all foreign shipping is compelled to enter and clear at this place.

Seattle is located on Elliot bay, on the eastern shore of Admiralty Inlet, near the mouth of the Duwamish river. A fertile tract of farming lands is convenient to this place which is rapidly filling up. The coal mines in the vicinity, and the numerous lumbering mills and logging camps adjacent, contribute

largely to the prosperity of this city. Many neat dwellings are visible, and healthy progress is manifest in every direction. The *Seattle (W. T.) Intelligencer* of July 18, 1870, says, "Last year there were constructed in this city one church (Catholic), eleven buildings for stores, and thirty-seven one and two-story dwelling-houses, besides some twenty smaller buildings. This year, up to the present time, there have been built, and in process of construction, one church (Episcopal), one public school-house, three warehouses, several business houses, one livery and sale stable, and forty-eight one and two-story dwelling-houses, some of them quite expensive structures, besides an unusual number of small tenements. Two or three of our hotels have been greatly enlarged and improved to accommodate their increasing business."

Stellacoon is located on the eastern shore of Puget Sound, and has long been a depot for shipping stock; it possesses facilities for commerce and shipbuilding. Good farming land and stock ranges border on this place.

Olympia is situated near the head of navigation, and is equidistant from several prominent places. The capitol of the territory is located at this town; the federal and territorial officers hold their offices here. The Legislature assembles and the Supreme Court hold annual terms at the capital. The mails are daily distributed at this point. All the elements contributing to the development of this central metropolis impart steady, healthy progress; nearly 100 buildings were constructed during the year 1870. We append the census report for 1870, as follows:

Number of dwellings,	- - - - -	360.
" Families,	- - - - -	335.
" White males,	- - - - -	726.
" " females,	- - - - -	410.
" Col'd males,	- - - - -	42.
" " females,	- - - - -	16.
Total within the city limits,	- - - - -	1194.

We devote greater space to the development of this place, being the capital and one of the first settled towns in our territory. Our fair readers will notice the great disparity existing between males and females; this inequality is still more apparent in other less favored localities. We submit these figures to such ladies as are willing to "change their names," and invite

them to go at once into "sweet captivity" in the sunset land.

Tumwater is two miles above Olympia, at the "falls." Considerable trade centers there; several mills and a tannery are in active operation. This place possesses great facilities for manufacturing purposes.

Several towns are located along the margin of the sound, in which the development of coal or lumber affords employment to hundreds of men. The hum of machinery, the clanking of lumber and the songs of the seamen form constant music. "At each of the great mills and at the coal-mines, there are villages containing from 150 to 300 inhabitants. The improvements generally vests in the mill proprietors, and usually consists of a few handsome residences, and comfortable houses for those engaged in and about the mills, a hotel, store, smith-shops, etc., pertaining to the business and forming each a community within itself. . . . At all these points the hum of machinery is constant, the rattle of lumber continuous throughout the day as it is taken from the mill directly into the vessel, presenting a busy scene in contrast to the deep solitude reigning in the great forests before the advent of civilization here." — *Meeker*.

Vast resources are now latent in this fine valley; coal, iron, copper, silver and gold slumber in our hills. The mighty torrent gnashing in mad career to the sound, the tall cedar so abundant in our lowlands, the numerous hard woods — maple, ash, beech and other furnishing material rotting in the swamps, the vast wealth annually wasting in those regions silently invites development. "The cedars, maples and other woods of the territory afford excellent material for the manufacture of furniture, ornamental house finishing, sashes, doors, blinds, churns, tubs and pails, beside the endless variety of other articles of wood consumed by modern society." — *Garfield*.

The huge fir trees so abundant in our valley and so accessible to navigation, have been made to some extent subservient to the wants of commerce; this wood is manufactured extensively and exported in vast quantities to the uttermost ends of the earth; it has been tested by naval constructors at home and abroad, and commended for shipbuilding. "Our fir timber is not only durable but very strong, possessing the quality of stiffness in a very high degree. I have not at hand the statement showing the strength of this timber, but must refer you to the reports of tests made at the United States navy-yard at Mare Island in

California. Those tests proved it to be stronger than white oak." — *Garfield*.

Spars of stately proportions are abundant and are exported in cargoes; the governments of the leading maritime countries have, for years, obtained spars here for their navies. The fleets of the world may enter our waters, ride in perfect security, and procure repairs in hull or spars at short notice at low figures.

"The lumber of Puget Sound, in proportion to its population, is already enormous. There is not more 12,000 to 15,000 inhabitants resident upon the Sound and its tributaries. This population exports more than 155,000,000 feet of lumber annually, besides 20,000,000 laths and shingles, and a large amount of piles and spars. These products of the forest are sent to California, South America, the Sandwich Islands, Australia, China and Europe. Large quantities of spars have been shipped to Europe, many of which were furnished by contract for the French navy; those designed for lower masts were required to be, when hewn into octagonal shape, 120 feet long and 42 inches diameter at a point forty feet from the lower end. Perhaps no other existing forests could furnish spars of such gigantic size, and certainly not at the prices for which they can be afforded upon Puget Sound." — *Garfield*.

This branch of industry operates twenty saw-mills of different capacities, and 150 logging camps and other establishments, which, combined, creates remunerative demand for farming produce, oxen, beef, pork, lard, butter and fish, while skilled labor is better rewarded than in any other country. Annexed are the statistics of Puget Sound collection district for the year ending June 30, 1879:

IMPORTS. — Value of goods imported from foreign countries, \$33,105; amount of duties collected, \$14,326.

EXPORTS OF DOMESTIC PRODUCTS. — Value exported in American vessels, \$291,000; in foreign vessels, \$149,905; total export to foreign ports, \$440,915, viz.: live animals of all kinds, \$43,713; lumber of all kinds, \$266,288; all other articles, \$130,914.

TONNAGE BELONGING TO THE DISTRICT.

62 sailing vessels,	- - - -	tons	12,711.09.
19 steamers,	- - - -	"	2,015.87.
8 scows and barges,	- - - -	"	140.77.
89	Total tonnage,	- -	15,867.73.

VESSELS CLEARED DURING THE YEAR. — American vessels for foreign countries: 115 steamers, 4 ships, 18 barks, 2 brigs, 18 schooners and 2

sloops. Total: vessels, 149; tons, 55,606.25; crew, 2,103. Foreign vessels for foreign countries: 6 steamers, 16 ships, 6 barks, 3 sloops. Total: vessels, 31; tons, 19,327.42; crew, 456. American vessels coastwise: 29 steamers, 11 ships, 16 barks, 1 brig, 9 schooners. Total: vessels, 66; tons, 81,779.74; crew, 1,092. Total number of vessels cleared, 245; tons, 106,613.41; crew, 3,653.

VESSELS ENTERED DURING THE YEAR.—American vessels from foreign countries: 95 steamers, 1 ship, 10 barks, 1 brig, 18 schooners, 23 sloops. Total: vessels, 147; tons, 89,840.06; crew, 1,852. Foreign vessels from foreign countries: 6 steamers, 7 ships, 3 sloops. Total: vessels, 16; tons, 5,966.57; crew, 62. American vessels coastwise: 89 steamers, 18 ships, 43 barks, 3 brigs, 6 schooners. Total: vessels, 109; tons, 55,551.16; crew, 1,853. Total number of vessels entered, 272; tons, 100,767.81; crews, 3,503.

In the coasting trade belonging to other ports there are 1 ship, 12 barks, 1 brig, 4 schooners. Total: vessels, 18; tons, 7,761.25.

The value of shipments coastwise cannot be obtained from any other source than the mills from which the lumber is shipped, as the vessels do not clear from this port unless sailing under a register. The year's shipments coastwise is estimated at three millions of dollars; being an increase over the preceding year of nearly three hundred thousand dollars. Imports coastwise cannot be ascertained, as the vessels are not obliged to report at the Custom House, except in certain cases.

Shipbuilding has been inaugurated on Puget Sound. The dense forests of firs fringing our waters, the tall trees, the close grain, the bending elasticity, and the cheapness of the material, renders this valley the shipyard of the north Pacific coast. In 1867, the board of marine underwriters of San Francisco instituted an inquiry into the facilities for, and the cost of shipbuilding on the northwest coast, as compared with eastern shipyards. The facts developed by these enquiries were, that vessels could be built of the timber found on that coast, all other finish being the same, at a less price than on the Atlantic seaboard or the British islands. The committee appointed reported that "The growth of the business has also been hindered by grave doubts as to the strength and durability of our firs when used as ship timber. The predilections of all American and English shipwrights are naturally for oak; but oak has been scarce, or rather the oak of this coast has generally been found worthless for these purposes, while only the laurel has been found suitable as a substitute for it. Sufficient time has, however, elapsed to prove to us that we have several kinds of ship timber in the greatest abundance, and of a size and quality in every way better adapted for ship building than the timber used for many years back on the coast of Maine or the British Provinces.

"The red and yellow fir trees, which constitute about one-half of the dense growth of timber of Oregon and Washington Territory, have become celebrated throughout the world for their magnificent proportions and the serviceable quality of the spars and lumber supplied from them. They frequently furnish sticks 150 feet long, 10x18, and even 24x24 inches square, without a particle of sap, without a rent or check, perfectly sound and straight. Planks of this timber, 60 and 90 feet long, are readily obtainable, thus avoiding the necessity for more than one-third to one-half as many butts or scarfs in a ship's sides, decks, or fore-and-aft timbers as are required in Eastern or European vessels. As to the strength of these woods many mechanics think it fully equal to that of the Eastern white oak, and they all agree that if oak be stronger, nothing is easier than to use enough more of our fir to make up the difference in strength. In some other respects the fir has the advantage over oak. It contains just enough pitch to enable it to hold iron fastenings with a tenacity so great that bolts and spikes generally break before they will draw out of it. Iron never becomes 'sick' when embedded in it, as it does when corroded by the acid which saturates all kinds of oak. As to its durability, we know that although it has not yet been tested as the sole material of a guano or pepper ship, yet it has been extensively used for new timbers, planking, ceiling, decks, keelsons and stanchions, in large vessels repaired on the coast; it has been the sole material used in building our coasting and river schooners; it has built the *Chrysopolis*, *Yosemite*, *Capital*, *Geo. S. Wright*, *John T. Wright*, and many other river steamers. It has been used in doubling and rebuilding all the old steamers on this coast, and we have never yet met a ship-master who, during our fifteen years of this experience, has complained of its want of durability."

The gravelly prairies adjacent to the sound are thinly timbered with pasture oak; this timber is close grained and elastic; the trunks of those trees are generally too short for keel pieces, keelsons, beams or planks, but are long enough and well adapted for stem, stern and rudder posts, windlass barrels and pall-bits, catheads, davits, chocks, jaws and cleats; the limbs and branches afford good materials for boatbuilding. Ash abounds on our river bottoms convenient to the shores; this wood is suitable for staves, hoops, hanks, oars and paddles. Elm in moderate quantities is also convenient, from which blocks and

dead-eyes may be manufactured; thus the most desirable materials for shipbuilding are latent on our borders. The smaller saw-mills, propelled by water-power and economically managed, manufacture short lumber of different dimensions at low figures; rough fir lumber under fifty feet in length, suitable for beams, timbers, rails, stem, stern and rudder posts, may be obtained at those establishments at six dollars; keel-pieces, keelsons, bends, plank, clamps and ceilings of fir, neatly dressed, may be had at ten dollars in coin per thousand feet. At the large steam-mills several large vessels have been built; in such cases long lumber is required, for which higher figures than those quoted are collected, twelve dollars (coin) for rough, and twenty for planed fir lumber per thousand feet, are the prices usually charged for ship timber; spars come higher according to length, texture and other circumstances. From personal observation and experience on the northeast and northwest coasts, we conclude that the materials—keels, keelsons, stem, stern and rudder posts, floor and top timbers, plank-shears, bends, plank-clamps, ceiling, rails, bulwarks, deck plank, bulk-heads and the ordinary finishing needed in the construction of a 1000-ton vessel, may be had with the same convenience, of as good quality, and cheaper than the needed materials for a vessel of 100 tons could be procured in Boston, Mass.

"A portion of the timber grown and lumber manufactured in the vicinity of Puget Sound, is being worked up in the region of its production with profit, and the amount is steadily on the increase. Shipbuilding is rapidly on the increase and destined to become one of the important industries of the country. The very favorable report of the San Francisco Board of underwriters recently made, covering both the quality and durability of materials and the cost of construction, has very materially stimulated this branch of industry. It is now conceded that fir timber for all the purposes of naval construction, possesses the strength and durability of white oak, and holds fastening better." — *Garfield*.

During our sojourn on Puget Sound, some fifty vessels were built, some registering 600 tons; a ship approaching 1000 tons has been built recently at Port Madison, and has arrived at San Francisco. The *San Francisco Bulletin* of Sept. 27th, says:

"The signs of the times tend towards a compulsory appreciation of our Pacific coast woodlands. Constant reminders, in the shape of sug-

gestive newspapers paragraphs and magazine articles have had salutary effects; giving encouragement and wholesome advice to lumbermen and landowners, which have not been unheeded. The immediate or prospective value of any class of timber once demonstrated beyond reasonable doubt, that timber commands respectful attention from all parties interested in the lumber business. The many are naturally eager to avail themselves of the discoveries of the few. Attention is concentrated upon the timber, and experience constantly brings to light some new quality or chance for utilization. It is unpleasant to constantly lecture the people upon their general neglect and inertness in regard to Pacific slope resources; but a good excuse is found in the practical development it is calculated to accelerate. As a dernier resort, then, there is justification in forcing local recognition of comparatively local resources. In this connection none can begrudge Messrs. Meigs & Gawley, San Francisco lumber merchants, the meed of praise to which they are justly entitled. They have not only, in common with other lumber firms, erected saw-mills on the Puget Sound coast, but have taken a notable new departure by constructing, at Port Madison, (W.T.) the largest and handsomest specimen of marine architecture ever produced from the resources of this coast. The vessel is alike a remarkable demonstration of the shipbuilding resources of Puget Sound, and a credit to the gentlemen whose energy and enterprise have carried this undertaking to completion during the unusual depression to which business has been subjected for the past two years.

The material of which this ship (appropriately named *Wildwood*) is built, merits special attention. No better material, either for strength or beauty, can be found in this or any other country. The timber—yellow fir—is all of native growth, taken from contiguous forests, and prepared at the Port Madison mills. For the purposes of marine construction, ample experiments have been made to test the relative strength of oak and yellow fir; and the decision accords to the latter superiority in all respects where weight or strain occurs to the hull of a vessel. According to trials made at the Mare Island navy-yard, the relative tenacity of the fir to oak is 27 to 22. When, therefore, we find a careful selection of the various pieces made from this prime lumber—larger by almost one-third than are usually found in vessels of corresponding tonnage—with every joint closely fitted, and the multifarious parts bolted and riveted in the securest manner, as is the case with this ship, we feel warranted in pronouncing her second to none ever built in any country. This is a bold statement, but the doubting reader can obtain satisfaction by personally inspecting the vessel.

The model of the *Wildwood* is that of a full clipper, having $27\frac{1}{2}$ inches dead rise, with sharp ends, and calculated to rank among the fast sailers. Obtain a fair view and she is a paragon of beauty, her longitudinal curve of five feet lending grace to every line. Without any hesitancy, both landmen and mariners pronounce her an elegant craft at sight. Her carrying capacity for general merchandise is about 1700 tons; and for lumber 1,000,000 feet. Her dimensions are as follows:

Length of keel, 187½ feet; over all, 200 feet; breadth of beam, 41 feet 10 inches; depth of hold, 22 feet 1 inch. And right here we may as well state that the *Wildwood* is not only the finest, but is also the largest vessel ever built on this coast.

The keel consists of two pieces of timber, each 10 inches square, bolted one above the other, and resting on a shoe 8x18 inches. Upon these rest the floor or frame timbers, 14 inches thick and 16 inches deep, bolted together in pairs, forming one frame, with but two inches space between frames. Without giving figures, it is only necessary to say that the keelson, riders, stanchions, sister keelsons and floor are all substantial and well proportioned. At either end of the ship, in the lower hold, are three pairs of pointers, secured by immense knees, in pair of which one may count 58 bolts of 1 1-4 inch iron, exclusive of those covered by the knees. All through the lower hold the bolt-heads are so plentiful as to remind one of a vast mosaic pavement, of which they describe the corners. The depth of the lower hold is 14 feet 1 1-2 inches. Between decks the height is 7 feet 6 inches, unobstructed from stem to stern. The thinnest part of the hull is between decks, and there it is 31 inches, solid wood. The thickest part, at the bilge, is 33 inches, full. All the decks are best quality 3 1-2 inch square timber, laid with great care—the grain of the wood being all edge up. The outer covering of the vessel is worked on with composition spikes below the water line, and with iron above, securely fastened with 1 1-4 inch seasoned treenails and copper butt and bilge bolts. There were used in her construction over three tons of composition bolts, and a quarter of a mile of 1 1-4 inch iron bolts in the dead wood, forward and aft.

Commencing forward is the top-gallant forecastle, extending 28 feet aft, and occupied by cat-heads, 15x17 inches; a pawl-bit, 16x20 inches; a patent windlass gear, capstan and windlass-bitts, 8x24 inches. The bow-chocks are 15 inches high forward, and terminate in taper near fore swifter. Around the foremast are main and main topmast stay-bitts, arranged in neat and substantial manner. The ship's pumps, two in number, with brass chambers and iron pipes, are about the mainmast.

The accommodations for officers and crew are all on the upper deck. The cabin is 38 feet long, 25 feet wide at the forward, and 19 feet wide at the after end, with three entrances. Aft, on the starboard side, is the captain's state-room, 8x9 feet, well furnished, and opening forward into a saloon; with a state-room on either side. Aft this saloon are store room, wash room, water closet, etc., and a gangway to the poop-deck. The main saloon, in the middle of the house is 12x18 feet. It has three state-rooms, six feet square on the port side, and two state-rooms and pantry on the starboard. Forward of the saloon, and between the passage leading from the waist, is a state-room around the mizen mast, which passes up through the house. On the starboard and port of the entrances are the two state-rooms for the mates. The cabin, as will be seen, is convenient and comfortable. The forward house is 12x44 feet, containing a fore-castle of 18 feet for the men; the remainder is divided up into galley, petty officers' quarters, carpenter's

shop and sail-room. Almost everything involving the labor of the artisan was prepared on the ground, and all the iron and brass works, together with the composition bolts, were gotten up at the foundry connected with the firm's Fort Madison mill."

Harbors. The northwest coast is very destitute of safe harbors; we know of no coast so barren of secure anchorages. The bay of Monterey is a broad sheet of water and acceptable in all winds; this roadstead was the rendezvous of the Spanish and Mexican fleets; considerable commerce congregates there since the transfer of the territory and the advent of live people; little trade or exchange takes place. This broad, expansive bay opens to the northwest and north winds, and the swells of the Pacific ocean come in with such force as to prevent the building of wharves or docks on the margin of the bay. The bay of San Francisco is a large sheet of water running about sixty miles S.E. and N.W., and from ten to twenty miles in width. The fierce gales from the southeast prevailing in those regions in the winter months, have a clear sweep of sixty miles, create a cross sea, and make much havoc among the shipping. The north winds have a range of over twenty miles; the westerly gales rushing "through the gate of tears" from the Indies, stir up the waters into fury and renders the anchorage unsafe. Any part of Barnstable bay affords as safe protection to vessels as the bay of San Francisco. In 1841, Lieut. Wilkes, commanding the United States exploring expedition, visited the northwest coast, and has recorded his experience in the principal harbors, from which we quote extensively. Of San Francisco he remarks: "On the first of November we had a wind that enabled us to make sail, although it was late in the day before it was sufficiently strong, and by that time the ebb-tide was spent. To avoid any further delay I determined to make the attempt; signal was accordingly made, and the vessels were in a few minutes underweigh, standing out of the harbor. It may indeed be said that it is practicable to enter and depart from this port whenever the tide is favorable. We continued beating out to gain an offing until toward sunset, when it fell calm and the tide failed us. The 'Vincennes' was, therefore, compelled to anchor in six and three-quarters fathoms of water, three miles from the land, and signal was made to the two brigs, which were about three miles outside of our position, to do the same. On coming to anchor there was scarcely any swell, and the ship lay almost as still as if she had been within the harbor; the sun-

set was clear and everything betokened a calm and quiet night. At about 10, P.M., the swell began to increase without any apparent cause, and so rapidly as to awaken my anxiety, but being in such deep water I thought the vessel was sufficiently distant from the bar not to be exposed to any breakers. As the flood continued to make the swell increased, and by midnight we were enveloped in fog, without a breath of air, and the ship rode over the rollers that were now becoming very heavy, causing her to pitch violently. There was, however, no break to them, but as ample scope of cable had been given, the ship occasionally swung broadside too, when the heavy pitching was exchanged to rolling, so deep as to endanger our masts. At 2, A.M., a breaker was heard outside of us passing in with the roar of a surf, after which they became constant and really awful. The ship might now be said to be riding among breakers of gigantic size; they rushed onward with such tremendous roar and violence that as each wave was heard approaching, it became a source of apprehension until it had safely passed; such was its force that when it struck the ship the chain cable would surge, the ring-stoppers parted, and some few fathoms of the cable escaped. As the time of high water approached, the roar of these immense breakers was constant. The ship was as if tempest-tossed, and our situation became at each moment one of great solicitude. The actual danger of wreck was not indeed great, for, in the event of parting our cable, the tide would have carried us toward the harbor and in deep water, where the rollers would have ceased to break; there was no great danger of our drifting on the bar, which was a mile or two to the northward of our position. I looked forward with anxiety for the time of high water as the period when we should be released from our unpleasant situation, not only the change in the course of the tide, but also by the cessation of the breakers. Our situation afforded me an opportunity of measuring the velocity of the waves as they passed the ship, and though the distance was short, yet the observations were numerous and gave the velocity at from 15 to 18 miles an hour, their height was over 30 feet, width from 800 to 1000 feet. At 3.30, A.M., one of these immense breakers struck the ship broad on the bow and broke with its full force on board; the cable surged, the stoppers were carried away, and the spar deck swept fore and aft; the boats and booms broke adrift, the former being stove and the latter thrown

with violence to one side. Unfortunately, Joseph Allabouse, a marine, who was in the act of ascending the ladder at the time, was struck by one of the spars and so much injured that he died a few hours afterwards. It was not until between seven and eight o'clock that the ship could be relieved from this situation; at that time a light air from the land sprung up, of which advantage was at once taken to weigh our anchor; the rollers, however, had by this time ceased to break, the sea began to fall, and in a few hours afterwards, regained its former placid and quiet state." — *Wilkes*.

"I too have loved thee, ocean;" we have passed over the bar of San Francisco several times in vessels much smaller than the "Vincennes," and on one occasion we caught the duplicate of what Wilkes describes; the wind left us, a heavy swell rolling in. For six mortal hours of agony we suffered pangs of torture—

Down dropped the sails against the masts;

'Twas sad as sad can be;

We did move only to dodge

The breaking of the sea."

We have a wholesome terror of the bar of San Francisco. "A vessel should not anchor upon the bar if she can possibly avoid it; frequently a heavy swell sets in without wind, and if the current is running strong ebb, it allows little chance of escaping from an uncomfortable berth. . . . During heavy southeasters the sea breaks upon the San Francisco bar clear across the entrance, presenting a fearful sight. The sound can be heard at the anchorage in front of the city." — *Davidson*.

Seamen on the coast of California observe great caution in passing the bar; the great ocean steamers get periodical rubs, and some have been crippled; the huge ships of our navy have also succumbed to the terrors of the bar. On a recent occasion the steamship "Ossipee" caught a cleaning there, of which the local press were forced to take notice. The *Alta California* of Nov. 28, 1870, says: "The pilot-boat 'Curtis' went outside the heads last Saturday to take the pilot of the U. S. steamer 'Ossipee,' which cleared for a cruise on the southern coast. On reaching the bar a very rough sea was encountered. A boat was lowered from the 'Curtis,' and being manned by one of the crew, started for the 'Ossipee' to take off the pilot. It had proceeded but a short distance when it was capized. A boat was at once lowered from the 'Ossipee,' manned, and sent to

the rescue; they succeeded in saving the man and landing him on the steamer. The pilot states that, soon after this accident, a tremendous sea broke over the 'Ossipee,' and the water was over the heads of those on the poop-deck of the ship; an officer now called to him, 'See, the pilot-boat is swamped.' He looked and saw the 'Curtis' laying on her beam ends with her masts under water. At first sight it was supposed that the boat and all on board would be lost, but a friendly wave righted her, minus main gaff and head sails, which had been carried away. She was now in great danger of going ashore, but those on board managed to set a little sail and she got off in safety. The 'Ossipee' at once raised a signal of distress, which was seen at the lookout and immediately telegraphed to the Merchants' Exchange. The tug 'Neptune' was sent out, but found she could not live on the bar. . . . The 'Ossipee,' after the accident, found the water too rough to put to sea and returned to port the same night."

The Columbia river can hardly be classed an accessible harbor, its entrance being walled in with a huge sand-bar, on which the ocean swell breaks with terrific fury. Many vessels have been buried in these sands. Among the noble army of martyrs the U. S. ship "Peacock" found an inhospitable grave. Lieut. Wilkes visited this river and recorded his appreciation of its facilities for the general purposes of commerce. He remarks: "On the twenty-eighth of April, at 6, A.M., we made Cape Disappointment, to which we soon came up, with a heavy sea, caused by strong winds that prevailed for several days. I, notwithstanding, stood for the bar of the Columbia river after making every preparation to cross it, but on approaching nearer, I found the breakers extending from Cape Disappointment to Point Adams in one unbroken line. . . . Mere description can give little idea of the terrors of the bar of the Columbia; all who have seen it have spoken of the wildness of the scene and the incessant roar of the waters, representing it as one of the most fearful sights that can possibly meet the eye of the sailor. The difficulties of its channels, the distance of the leading sailing marks and the uncertainty to one unacquainted with them, the want of knowledge of the strength and direction of currents, the necessity of approaching close to unseen dangers, and the transition from clear to turbid waters, all cause doubt and mistrust. Under such feelings I must confess myself

laboring, and although I had on board a person from the Sandwich Islands who professed to be a Columbia river pilot, I found him at a loss to designate the true passage, and unable to tell whether we were in a right way or not. I therefore determined at once to haul off with the tide which was running ebb with great rapidity, and which soon carried us back to the blue waters of the ocean."

Prof. Davidson, of the coast survey, in describing this river says, "The entrance to Columbia river is five miles wide between the nearest parts of Cape Disappointment and Point Adams, bearing N.W. by W. $\frac{1}{2}$ W., and S.E. by E. $\frac{1}{2}$ E. from each other. But the passage is greatly obstructed by shifting shoals, which lie two or three miles outside of the line joining the two points. The numerous surveys that have been made of this bar at different times, prove conclusively the great changes constantly going on in the channels through the shoals, that no sailing directions that may be prepared can be relied upon for any great length of time. The best advice that can be given is, when up to the bar take a pilot. . . . During heavy weather, and especially in winter, the sea breaks with terrific fury from northwest of Cape Disappointment well to the southward of Point Adams. The mail steamers have sometimes to wait days for the smallest show of an opening to get in, and sailing vessels have laid off the entrance six weeks waiting for a fair opportunity to enter. Many lie inside for weeks unable to get out; the mail steamers, by exerting all their power, sometimes drive through the combers, but have their decks swept fore and aft by every sea. Few places present a scene of more wildness than this bar during a southeast gale."

A telegram to the *Sacramento Union*, dated Portland, March 3, 1871, says, "The steamer 'Ajax' succeeded in crossing the bar for San Francisco on Wednesday, at 10, A.M., after three hours' trial. Barques 'Rosedale,' 'Live Yankee,' and 'Stella,' are waiting their chances to cross the bar going out. Barque 'Whistler' is aground below St. Helen's, and may require lightening to let her out."

"The ship 'Montgomery Castle' has completed her cargo and was hauled out in the stream yesterday; she is drawing 18 feet, and will have to wait a rise of water to cross the bar, even if the ice blockade was broken up." — *Oregonian*, Dec. 29, 1870.

The "river of the west" is often, in the winter months,

covered with fields of drift ice, which renders its navigation dangerous and unreliable. The following citations from the *Oregonian* will demonstrate this fact:

Dec. 20, 1870. — The Columbia closed. The steamers from the Columbia river report that slush ice is running heavily, but as yet they are able to make their way through.

Dec. 22, 1870. — The Columbia river being closed, preventing the transportation of the mails below the Falls, Mr. Underwood telegraphed on Tuesday to Ogden, directing that all mails be sent to Sacramento and San Francisco till further orders.

The steamer 'Fanny Troop' arrived last evening from the Lower Columbia, she reports the running ice very heavy. No further trips below will be attempted for the present.

Dec. 22, 1870. — Yesterday morning the river opposite Stark street was frozen almost across, and ice remains far out in the river from the eastern bank till late in the day. It will require but few degrees of increase of cold to close the Willamet against steamboat navigation. The steamer 'Okanagan' succeeded in getting up yesterday from Astoria via the Willamet slough. At St. Helen's the Columbia was very full of ice, and for most of the width of the river it was stationary.

Dec. 26, 1870. — The 'Geo. S. Wright' did not succeed in getting down the Columbia river Friday night. The ice blockade was found to be so heavy that the ship could not be forced through; she returned and is now laying at the steamboat dock. The barque 'Lydia,' ready to sail, is also at her moorings at the dock. The steamer 'Racine' went down as far as St. Helen's, and returned on account of the ice.

Dec. 28, 1870. — Owing to the block of ice in the Columbia, the steamer 'Oriskany' was unable to come nearer than St. Helen's.

Puget Sound. The approaches into the Strait De Fuca are wide and clean, the soundings are regular, and the actions of the tides are well ascertained. The long, narrow inland sea, known by the general name of Puget Sound, is accessible in all winds, and affords secure shelter for the navies of the world. In "a life on the mountain wave," we have sailed on several seas, sounds and straits, but have not witnessed any sheet of water presenting so many elements of sublimity and usefulness as those comprising the Strait De Fuca, Admiralty Inlet, Hood's Canal and Puget Sound, save and excepting the waters bordering on British Columbia.

Lieut. Wilkes, commanding the U. S. Exploring Expedition, visited those waters in 1841, and made general surveys of the principal channels and harbors. In describing this labyrinth of waters, he states:—"The Strait De Fuca may be safely navigated; the wind will for the greater part of the year be found

to blow through them and generally outwards; the shores of the Strait are bold, and anchorage is to be found in but few places. We could not obtain bottom in some places with sixty fathoms of line, even within a boat's length of the shore. . . . Nothing can exceed the beauty of these waters,—no shoal exists within the Strait of Juan De Fuca, Admiralty Inlet, or Hood's Canal, that can in any way interrupt the navigation of a seventy-four gun-ship. I venture nothing in saying that there is no country in the world that possesses waters equal to these. They cover an area of about 2000 square miles. The shores of all these inlets and bays are remarkably bold, so much so that in many places a ship's side would strike the shore before the keel would touch the ground. The country by which these waters are washed is remarkably salubrious, and offers every advantage for the accommodation of a vast commercial and military marine, with conveniences for docks, and a great many sites for towns and cities,—at all times well supplied with water, and capable of being provided with everything by the surrounding country, which is well adapted for agriculture."

Prof. Davidson has recorded his admiration of these waters. He says, "We know not where to point to such a ramification of inland navigation, save the British Possessions to the northward. For depth of water, boldness of approaches, freedom from hidden dangers, and the immeasurable sea of gigantic timber coming down to the very shores, these waters are unsurpassed."

Governor Stevens, of Washington Territory, says of this romantic region:—"On the whole west coast from San Diego to the north, nothing like this is met. All the water channels of which Admiralty Inlet is composed, are comparatively narrow and long. They have all more or less bold shores, and are throughout very deep and abrupt, so much so that in many places a ship's side will strike the shore before the keel will touch the ground. Even in the interior and most hidden parts, depths of fifty and one hundred fathoms occur. . . . Our modern and more extensive soundings prove that this depth diminishes toward the extremities of the inlets and basins. A high tide goes up from De Fuca strait into all these sounds. . . . Nothing can exceed the beauty and safety of these waters for navigation; not a shoal exists within them; not a hidden rock; no sudden over-falls of the water or the air; no such strong

flaws of the wind as in other narrow waters. . . . And there are in this region so many excellent and most secure ports that the commercial marine of the Pacific ocean may be here easily accommodated."

"The importance and extent of this inland sea, the number and beauties of its numerous harbors, the value of the magnificent forests by which it is surrounded, and its inexhaustible coal beds along its shores, are but little understood or appreciated by those who have not seen and examined for themselves; possessing as it does more than seventeen hundred miles of inland shore line, having in every channel, bay or harbor sufficient depth of water for the largest ship that floats in any navy in the world; channels unobstructed by rocks or sand bars, with an entrance so broad and safe that no pilots have been or ever will be needed."—*Hon. Alvin Flanders.*

Scenery. In no country we have visited have the gifts of God been so lavishly strewn as we have seen along the valley of Puget Sound. The clear, transparent atmosphere lends enchantment to the crescent of mountains adjacent; those shining cupolas as seen in clear days glittering in the sunbeams, afford the most charming landscape. In sailing on those waters thinking minds are lost in contemplating the beauty and grandeur of the scenes; romantic headlands on the right hand, and bold, abrupt islands on the left, with Mount Olympus on the one hand, and the frosted peaks in the Cascade range on the other, all forming the grandest sight on which the human eye can rest. "The scenery of this part of Admiralty Inlet resembles strongly parts of the Hudson river, particularly those above Poughkeepsie. The distant highlands, though much more lofty, remind us of the Kaat-Kills."—*Wilkes.*

"A voyage through these waters in the pleasant month of June is a source of pleasure and enjoyment; then the atmosphere is clear, transparent, exhilarating, and possessed of that magnifying power which renders distant objects clear and distinct to the vision, and gives natural scenery a definite outline and sharp cutting against the sky. In the foreground is the sound itself, dotted with islands, and penetrating the land in all directions with its channels, bays and inlets. Beyond is the mainland covered with lofty trees of fir and cedar, with here and there a village or milling establishment, nestled in a quiet bay, while an occasional prairie, with its comfortable farm hou-

ses, herds of cattle and horses, and roving fields of hay and grain, gives variety to the landscape, and speaks of home, plenty and comfort. Beyond these rise the everlasting mountains, miles away, yet distinctly outlined against the sky. To the eastward stands St. Helens and Adams, and Ranier, and Baker, mighty sentinels upon the Cascade range, whose summits penetrate far into the regions of ice and snow, and shine in the sun's rays like mountains of frosted silver. To the westward stands Olympus, solitary in his grandeur, without peer or rival in his dominion. This mountain is not only visible from the sound, but may be seen far out upon the ocean, occupying as it does the peninsula between the two. Vancouver's Island, San Juan, and the disputed archipelago, with Whithy Island the garden of the Puget Sound country, all constitute interesting parts of the varied and ever-changing scenery."—*Garfield*.

North Pacific Railroad. For nearly a century the leading statesmen of our country have cast longing looks across the continent, even to "the continuous woods, where rolls the Oregon." In 1784, Thomas Jefferson, while representing his country at the French Capital, secured the services of John Ledyard, and equipped that famous traveller for the purpose of exploring the northwest coast, to search for the source of the Columbia, and continue with the meanderings of that river to its mouth; also to obtain information relative to the Indian tribes in those regions, and the facilities for developing the fur trade among those tribes, and the possibility of extending that rich trade to the Indies. In 1847, Mr. Benton, in the U. S. Senate, when advocating a similar policy, said, "The preservation of our territory on the Pacific, the establishment of a port there for the sheltering of our commercial and military marine, the protection of our fur trade, and the aid to the whaling vessels, the accomplishment of Mr. Jefferson's idea of commercial communication with Asia, through the heart of our own continent, was constantly insisted upon as a consequence of planting an American colony at the mouth of the Columbia. That man of large and useful ideas, that statesman who could conceive measures useful to all mankind, and in all time to come, was the first to propose that commercial communication, and may also be considered the first discoverer of the Columbia river. His philosophic mind told him that where a snow-clad mountain, like that of the Rocky Mountains, shed the water on one side,

which collected into such a river as the Missouri, there must be a corresponding shedding and collection of waters on the other, and thus he was perfectly assured of the existence of a river where the Columbia has since been found to be, although no navigator had seen its mouth, and no explorer trod its banks. His conviction was complete, but the idea was too grand and useful to be permitted to rest in speculation. He was then Minister to France, and the famous traveller, Ledyard, having arrived in Paris on his expedition of discovery to the Nile, was prevailed upon by Mr. Jefferson to enter upon a more useful field of discovery. He proposed to him to change the theatre from the old to the new world, and proceeding to St. Petersburg on a passport he would obtain for him, he should there obtain permission from the Empress Catherine to travel her dominions in high latitudes to their eastern extremity, cross the sea from Kamschatka, or at Behring strait, and descending to the northwest coast of America, come down upon the river which must head opposite the head of the Missouri, ascend to its source in the Rocky Mountains, and then follow the Missouri to the French settlements on the upper Mississippi, and thence home. It was a magnificent and a daring project of discovery, and on that account the more captivating to the ardent spirit of Ledyard. He undertook it, went to St. Petersburg, received the passport of the Empress, and had arrived in Siberia when he was overtaken by a revocation of the permission, and conducted as a spy out of the country. He then returned to Paris, and returned to his original design of exploring the Nile to its source, which terminated in his premature death, and deprived the world of a young and adventurous explorer, from whose ardor, courage, perseverance and genius, great and useful results were to have been expected. Mr. Jefferson was frustrated in that, his first attempt to establish the existence of the Columbia River. But a time was coming for him to undertake it under better auspices. He became President of the United States, and in that character projected the expedition of Lewis and Clark, obtained the sanction of Congress, and sent them forth to discover the head and course of the river, whose mouth was then known for the double purpose of opening an inland commercial communication with Asia, and enlarging the boundaries of geographical science. The commercial object was first placed in his message, and as the object to legitimate

the expedition. And thus *Mr. Jefferson was the first to propose the North American road to India, and the introduction of the Asiatic trade on that road*; and all that I myself have either said or written on that subject from the year 1819, when I first took it up, down to the present day, when I still contend for it, is nothing but the fruit of the seed planted in my mind by the philosophic hand of Mr. Jefferson."

Fur Trade. The return of the British expedition, under Capt. Cook, from the northwest coast, and the reports which were circulated relative to the abundance of fur-bearing animals in those regions, exerted a powerful influence on the merchants in Europe. Among the more ardent spirits of that period infected was John J. Astor; that far-seeing trader immediately emigrated to Baltimore, and engaged immediately in the fur trade. Soon after he moved his business to New York, and operated on a large scale. In 1809 the Legislature of the Empire State incorporated the American Fur Co., of which Mr. Astor was the chief operator, and for the purpose of competing with the wealthy Russian American Co., on the northwest coast, Mr. Astor sought material aid from the United States Congress, which was refused on grounds of public policy. In 1810 the building of a trading depot at the mouth of the Columbia river was determined upon by Mr. Astor, on which occasion Mr. Jefferson encouraged the undertaking in the following terms:—"I remember well having invited your proposition on this subject, and encouraged it with the assurance of every facility and protection which the government could properly afford. I considered as a great public acquisition the commencement of a settlement on that point of the western coast of America, and looked forward with gratification to the time when its descendants should have spread themselves throughout the whole length of that coast, covering it with free and independent Americans, unconnected with us but by the ties of blood and interest, and enjoying like us the right of self-government."

The continent has been crossed on various parallels, explorations have been prosecuted under the guidance of scientific experts, the adaptation of the country for railroad purposes has been demonstrated by actual experiment. The following comparative distances on the competing routes will demonstrate the shortest and most practical:—

Distance from New York to San Francisco,	3,417 miles.
" " " " " Puget Sound,	2,883 "
" " Boston " San Francisco,	3,484 "
" " " " " Puget Sound,	2,942 "

The Central and Union Railroads, connecting the Bay of San Francisco with the valley of the Missouri, have been in active working order for several years past. Sherman, the highest elevation, soars 8000 feet in the heavens; much snow falls and accumulates in the gulches and valleys on the line of the roads, which necessitates the construction of snow-abeds over fifty miles of the road. Our recent journey over those roads afforded us an opportunity for observing the resources on the route, from which we conclude that the stockholders have little prospect for much local trade or travel. The distance between Corinne, on Salt Lake, and Kalama, in Washington Territory, approaches 800 miles. The country along this route is level, rich in soil and pasturage, and capable of producing grain, hay and vegetables in quantities, and feeding large herds of stock. Steps have been taken to lay out and construct a road over this valley, "a consummation devoutly wished for." This road will contribute materially to the benefit of the southern counties of our territory in general, and will be of great value to our people along the valley of Puget Sound. By this route our fishermen will transport the rich products of the deep in exchange for the clean, sweet salt from Utah, in vast quantities and at short notice. Several roads seeking connections with our inland sea are now in process of construction, chief among which is the "Northern Pacific." This vast road, connecting Puget Sound with Lake Superior and "the rest of mankind," has been richly subsidized by Congress, and is now in process of earnest construction; some 300 miles of the eastern and about 100 miles of the western termini are now finished. The advantages offered by this road to travel and transportation are evident, embracing the low grade of the mountain pass, the thermal winds from the Indies, genial bracing temperature, and a shorter route. This road traverses a level plateau of rich agricultural lands, which are rapidly filling up with hardy yeomanry, rearing homes on this romantic belt. Governor Stevens, who surveyed this route, records his appreciation of those regions. He says: "Along the coast the prevailing sea-breezes from the southwest in winter, and the northwest in summer, so modify the climate

that the iso-thermal lines run parallel to the coast, making the climate of Puget Sound nearly as mild, and in summer more agreeable than in San Francisco, while it corresponds closely with that of the western coast of Europe in the same latitude, and especially that of the British islands. The effect of this amelioration from the prevalence of the southwest sea breeze is felt in winter, as has been here shown as far east as Fort Union, on the Missouri, and has a constantly apparent effect on all the country east to Fort Benton." In an earnest desire to demonstrate the advantages of our northwestern country, we cite other authority, showing the shortness of this route, its grade, temperature and preference over any other; we quote from Mr. Mitchell: "Again a glance at the internal transit to the valley of the Mississippi by railroad on the northern route will show a like result in favor of our position. The reconnoissance already made on this route shows that the waters of Puget Sound are at least 500 miles nearer the great lakes and the distributing rivers of the great Mississippi, Missouri and their navigable tributaries. This is the only rival route known to the Pacific Coast. And here again the question of altitude, which is the great obstacle in the path of celerity and profit in conducting railroad enterprises, is vastly in our favor. The Central Pacific reaches a summit level above the sea of 7842 feet; that of the Union Pacific, in the Rocky Mountains, is 8250 feet. Our highest altitude on the line of the contemplated Northern Pacific is 6000 feet in the Rocky Mountains, with a much more favorable ascent and descent; besides, the whole line is comparatively free from obstruction by snow, and may be laid in the midst of good and highly productive, well timbered and watered agricultural lands through the entire route."

We conclude this important subject with a quotation from Mr. Garfield: "The route of the Northern Pacific Railroad, from Lake Superior in the Mississippi valley, to Puget Sound on the Pacific, is the shortest one possible between the river and ocean. The line of any Pacific road must cross meridians of longitude and not parallels of latitude. The further north, therefore, such line is located, the more distance is saved by the convergence of these meridians. As St. Louis and St. Paul are nearly upon the same meridian, and likewise San Francisco and Puget Sound, and the northern route runs as near as practicable to the northern boundary of the United States, it follows

that all that is gained by meridional convergence over any more southern route, must be credited to the northern road. Now it turns out that this convergence amounts to full 300 miles between the central and northern routes, making the latter so much shorter than the former. This difference amounts to twenty per centum of the length of the road, an item of itself sufficient to settle the whole question, did not other considerations arise. . . . It is difficult to convince persons, unacquainted with the country and the causes affecting meteorological conditions on the two routes, of the fact that there is less liability to obstructions from snow on the Northern than on the Central route; yet such is the fact, and I shall endeavor to assign some of the reasons therefor, which will be readily understood by every one present. It is known to all that altitude diminishes temperature, or, in common language, increases cold and the amount of snow-fall, other conditions being equal. Now, by reference to the table of altitudes upon the central route, one cause at least of the low winter temperature and heavy snow-fall on that route will be apparent. The distance from Omaha to Sacramento is 1774 miles. The average altitude of 1120 miles of this distance is 5230 feet, while the lowest point in that distance is elevated 3920 feet above the sea level. There are on this route 1100 miles having an actual altitude of over 4000 feet, 620 miles over 5000 feet, 350 miles over 6000 feet, and 110 miles over 7000 feet. By this it will be seen that the average elevation of the country over which this route passes is very great, indicating a low winter temperature and heavy snow-fall. Experience proves this to be true, and to such an extent that it is yet doubtful whether the line of road extending through this region can be operated successfully for several months in the year. Other causes besides altitudes operate to increase the snow-fall upon the Sierra Nevada which combine to make them what the Spanish name imparts—*very snowy mountains*. By reference to a topographical map of North America, it will be seen that the general altitude of the continent diminishes as the latitude increases. This not only gives the northern route lower summit levels in passing northern ranges, but also very much lower intervening districts of country. It has been ascertained by actual measurement that the great plain of the Columbia over which the northern road must pass, lies at an elevation of from one to two thousand feet

only above the level of the sea, whilst the corresponding basin through which the central route passes varies from four to six thousand feet high. This fact alone will explain the difference of temperature and snow-fall. But there are other causes which increase this difference. Another is found in the fact that a strong and constant atmospheric current draws through the passes of the Rocky Mountains, situated between the 46° and 49° of north latitude, during the entire winter. This current, like the gulf stream along our coast, is several degrees warmer than the surrounding atmosphere, and exerts a strong influence in modifying the mountain climate and reducing the amount of snow there deposited. So great is the effect of this current in those mountain regions that herds of buffalo from the adjacent plains, and from regions far to the southward, seek this district for winter quarters, to find less snow and better grass than elsewhere. This atmospheric gulf stream, operating in the very centre of the continent, and producing such beneficial results, is so remarkable that its existence has been doubted by many who have given little or no attention to the meteorology of the central and western portions of the continent. Its origin is evidently to be found in the warm southwest winds, which blow constantly during the winter months, and are deflected to the northwest by the Cascades, the upper and dryer stratum alone escaping over the mountains and reaching the Columbia basin. This stratum passes over the basin in a direct line to the northeast mainly as an upper current, until it reaches the Rocky Mountains, when it is checked in its general flow and escapes only through the passes above referred to, carrying with it the temperature of the tropics, it gradually parts with its heat along the route until its last remnants are apparently exhausted in the passes of the Rocky Mountains. To the same cause may be attributed what is popularly called the 'Chinook winds' of the Columbia basin. These southwest winds, which ordinarily cross the basin as an upper current, are occasionally bent downward and sweep along the surface. When this occurs all the phenomena of the Chinook winds are manifest; the thermometer at once begins to rise, and it matters not how hard the frost or how deep the snow, they both rapidly disappear under the modifying influences of those inter-tropical breezes."

The wonderful phenomena here described by Mr. Garfield, existing in those regions, are real and ever present. The influ-

ences of thermal currents in the Columbia basin are "fixed as in a frost;" no matter how deep the snow or hard the frost, they vanish quickly before the "Chinook winds." Mr. Garfield only "follows in the footsteps of illustrious predecessors," when he ascribes the cause of those changes to the south winds from the tropics. If that theory holds good, how can he account for the dereliction of those winds in passing heedless over the frigid sections fringing the Sierra Nevadas to the southward, and withholding tropical moisture; if the south winds have such power over our climate why do those intertropical breezes withhold their thermal powers from the frozen regions in the States to the south? We enter our earnest protest against this theory as not only clashing with physical laws, but also in working rank injustice to the mild and genial climate of Washington Territory. In other portions of this work we have demonstrated the origin of the "Chinook winds," which will bear repetition here. The northwest winds accompanying the Japanese current, strike our shores with much force, enter our valleys, pass through the Cascade Mountains, fan the basin of the Columbia, penetrate the passes of the Rocky Mountains, and subside in the labyrinth of valleys in those regions. This "gulf stream," traversing the central plateau of our continent, laden with moisture, dissolves ice and snow, stimulates grass, and imparts the appearance of green fields and budding orchards to the country traversed. This accounts for the warmer climate prevailing on Puget Sound and the Columbia basin, than that found in Oregon and northern California.

Oriental Commerce. The commerce of eastern Asia opens profitable channels to our shipping and stimulates shipbuilding on the northwest coast. The chief commodities produced in China and Japan—silks, opium, indigo, sugars, spices and dyes, average high prices in proportion to bulk, and will be transported to our shores in powerful steamships connecting with the North Pacific Railroad on Puget Sound. This high circle, traversing an even temperate lane, over which the finest teas may be carried without the loss of taste or flavor, affords speedy transit, saving time and interest, enabling merchants to make quick sales and obtain immediate returns. This short route, offering little wear to men or vessels, and a much lower premium on marine risks. The winged messengers of commerce will enter the broad Strait DeFuca in sunshine or moonlight, and

their rich cargoes will pay tribute to our merchants and revenue to our government, while the huge ships will obtain supplies of coal and provisions from our mines, farms, gardens and orchards.

Routes. The following exhibits some striking facts, demonstrating the relative facilities for developing commerce with eastern Asia; as figures won't lie, we commend this important statement to the careful attention of thinking minds:

Distance from New York to Shanghai, via Chicago,	
San Francisco and Midway Island,	10,423 miles.
Do., do., via North P. R. R. and Puget Sound,	8,756 "
Dist. from Philadelphia to Shanghai, via Chicago,	
San Francisco and Midway Island,	10,843 "
Do., do., via North P. R. R. and Puget Sound,	8,675 "
Distance from Baltimore to Shanghai, via St. Louis,	
San Francisco and Midway Island,	10,890 "
Do., via Chicago, N. P. R. R. and Puget Sound,	8,675 "

For nearly forty years on the sea we have observed the onward progress of ocean steam navigation, and we naturally look to the floating palaces as the common carriers of the most valuable articles of commerce. The coarse freight will, as heretofore, be transported in sailing vessels. The lumber and coal produced in our broad valley will entice the winged messengers to the Sound, the steady northwest winds will waft them safely into the Strait DeFuca and enable them to gain their destined havens in safety. Sailing vessels from India bound to San Francisco, are compelled to sight Vancouver's Island, run down the coast of Oregon and California, enter the calm belt—the "horse latitudes"—about the Farallones, which are often aggravated by thick fogs, detaining vessels for days, and frequently ending in shipwreck. Prof. Maury says, "The trade winds place Vancouver's island on the wayside of the road from China and Japan to San Francisco so completely, that a trading vessel under canvas to the latter place, would take the same route as if she was bound for Vancouver's island, so that all return cargoes would naturally come there in order to save two or three weeks, besides risk and expense."

Population. The great civil war in our country has operated adversely to our territorial development,—emigration and capital have been diverted from us. Peace being again restored a healthy reaction is visible; replenishing streams of hardy pioneers have, for several years past, rushed to our shores, and the cry is, "still they come." The recent census indicates nearly 30,000 inhabitants.

Schools are founded on a substantial basis; Congress granted the sixteenth and thirty-sixth sections within our territory for the support of common schools. Our pioneers have taken a lively interest in the matter; in every settlement, neat, commodious school-houses have been built, in which the young ideas are taught to shoot. In the principal towns private schools have been established, in which the higher branches are taught at reasonable prices. Congress has also provided a munificent domain for building and maintaining a University, which has been located at Seattle; a large wooden structure with the necessary outbuildings has been erected and furnished with globes, maps, books and other useful apparatus. This institution is in successful operation, and affords good facilities to the young.

Churches are liberally sustained, and clergymen of different denominations are domiciled in our territory; the consolation of the christian religion is freely dispensed among our people and very generally appreciated.

Press. The pioneers on the Pacific slope are earnest readers and liberally patronize newspapers. In our sparsely populated territory the press is freely encouraged, some twelve weekly papers being issued, cheerfully sustained and eagerly perused. We have several circulating libraries in towns and settlements.

Hotels sufficient to accommodate the public are convenient in every village, town or city; board and lodging are obtained at lower rates than on the eastern slope.

Enterprise. In new countries development is checked by the scarcity of capital and high rates of interest. Our prosperity has been obstructed for want of means; notwithstanding this much progress is manifest—getting out timber, manufacturing lumber, preparing spars, building vessels, and mining operations—all create a lively demand for oxen, and the products of the soil, dairy, forest and the waters. Our calm sea is constantly ploughed by swift steamers of various dimensions and power; some thirty find remunerative employment either in towing vessels, rafts and scows, transporting passengers, mails, merchandise or stock, and for other purposes. Our placid silvery waters afford attractive inducements to the smaller classes of steamboats, as fuel and water are omnipresent.

Founderies are located in various places, in which iron, copper and other metals are worked. Stoves are manufactured to

a limited extent, and greater development in this branch is hoped for. The abundance of iron and coal in our valley, and the great demand for axes and other edged-tools among our lumbermen, justifies the hope that hardware in its various branches may ere long be manufactured on the Sound. The annual grain crops have called several mills into active operation. Various grades of flour and feed for domestic and other purposes are ground and furnished at moderate figures.

Tanneries are in active operation; the cheapness of hides and the abundance of oak, laurel, birch, fir and hemlock bark in these regions, enable those establishments to furnish good leather. The superiority of our stock, the present demand for lumbering, and the prospective requirements of the fishermen, warrants earnest development in manufacturing heavy, strong boots. Several establishments are now engaged in that industry, and many more are needed to supply the demand, which is enormous, and daily on the increase. We commend this business to practical bootmakers of means and pluck.

Health. Our romantic country, basking in countless blessings, enjoys an enviable eminence on the score of health. Our cool nights forbids the nestling of fever or ague in our valley. The ill to which the flesh is heir in less favored climes seldom perch on our shores. No poisonous reptiles or mad dogs disturb our community—quacks betake themselves to honest labor, while "divine professors of the healing art" reap their bread by the sweat of the brow.

Our limited space admonishes economy, and items of general information are passed over. We append the annexed exhibit for the Territory of Washington from the recent census of 1870:

U. S. CENSUS FOR 1870.

COUNTIES.	Number of dwellings.	Number of families.	Number of white males.	Number of white females.	Number of colored males.	Number of colored females.	Total population 1870.	Total population 1860.	Real estate valuation.	Personal estate.	Tons of hay.	Bushels of grain.
Clarke.....	604	624	1649	1279	68	65	2061	2264	\$120,000	\$172,900	6740	60,110
Coville.....	143	148	418	294	14	14	720	461	131,005	583,061	1425	16,263
Chubb.....	180	194	518	147	5	5	677	585	100,000	108,000	785	7,101
Cham.....	110	106	218	170	43	38	384	140	104,570	104,570	1041	14,584
Island.....	673	263	464	170	25	26	634	264	111,005	107,945	1942	23,201
Jefferson.....	75	220	671	123	40	33	820	281	100,000	117,790	550	15,001
Kitchell.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Knap.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
King.....	418	470	1158	686	41	33	1647	1250	107,000	100,000	1674	20,214
Levell.....	245	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Madison.....	68	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Marion.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
McClure.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Merriam.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Monroe.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Newton.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Shelby.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Stoddard.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Sumner.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Thayer.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Union.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Walla Walla.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Whitman.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Yakima.....	285	281	681	123	40	33	820	281	100,000	117,790	550	15,001
Total.....	116	69	101	120	6	4	200	578	10,112	100,000	100	2,000

1870. 1860.

Recapitulation. Geographically, Puget Sound forms the central focus of our vast domains on the northwest coast, being equi-distant from San Diego on the southeast, and the peninsula of Alaska on the northwest. The iso-thermal line of 50° on which the great cities, universities, manufactures, commerce, and the visible wealth of the world is located, passes through our vale-of-paradise. The warm stream from the Indies bathes our shores, the aerial trade-winds accompanying the "gulf stream" fan our coast and modify our temperature, the moist wind from the tropics tempers our winters and bathes our fields with vernal showers, purifies our atmosphere, revives the sick, stimulates grass, mantles our pastures in living green, decks our orchards with budding shrubbery, and dresses our gardens with blooming flowers.

Harbors are continuous and secure from all winds, the ebb and flood of the ocean tides facilitate repairing, cleaning, painting, and afford every facility for seining and trapping fish. The vast resources latent in and around Alaska—cedar, coal, iron, copper, silver and gold; furs—bears, wolves, panthers, elk, deer, fox, etc.; cod, halibut, salmon, otter, seal, walrus and whale,—the visible and invisible treasures of that great territory will be developed from Puget Sound. The enormous wealth now slumbering in Siberia, metals and furs, fish, oil and ivory, will also enter our strait and pay tribute to our people. The rich products of the Indies will land on our shores, and pay freight to our ships and revenue to our treasury. The North Pacific Railroad, traversing over the iso-thermal plateau of 50° , connecting at each terminus with ocean steamships, will transport the products of Asia and the treasures from the sea to the marts of northeastern America and northwestern Europe. Ocean steamers congregating in our waters will create an active demand for, and develop our coal and iron and other useful metals; founderies, forges and machine-shops will be reared at the principal points. The lumber interest along our shores will feel the impulse, and greater development in this industry will be developed; shipbuilding in all its branches will attain a grand scale, and our Sound will become the great national shipyard on the northwest coast. Our splendid water powers will also be harnessed and resound to the music of machinery; various branches of mechanism will be established, and manufacturing will be developed to a mighty degree. Agriculture will

prosper in the healthy progress present; stock, horses, oxen, cows, sheep and swine, grain, hay, vegetables, and the products of the dairy, garden and orchard, will all be in active demand, stimulated by a home market. Replenishing streams of hardy emigrants to our valley will keep pace with our prosperity; our plains, valleys and bottoms will fill up with industrious farmers, who will bring their household gods, wives and children, with them, and our waste places will soon smile in domestic gladness. With the march of industry society will improve; churches, schools, colleges, newspapers, and other refining agencies will fill up the void, gardens will smile in tasteful flowers and rosy garlands under the guidance of intelligent women. Arts and science will flourish, men and women of genius will locate on our shores and find congenial retreat in nature's chosen bow-er—capital will seek investment in our busy marts—bankers, underwriters and "money-changers" will congregate, and the merchant princes from many lands will also abide with us on the margin of Puget Sound.

Westward, Ho! The scattering at Babel and the westward tramp of the human family is still "marching on." The moving throng is flooding our shores; every water craft from Europe comes crowded with precious humanity. Our broad country welcomes every sovereign, and rewards him with 160 acres of land; the mighty stream travels in the direction of the setting sun. Many halt by the wayside to pitch their tents in the inland valleys. A goodly number, however, press forward and cross the plains to find a home and a country in that genial clime, "where the setting west merges into the rising east." The Mediterranean of the northwest, and the Valparaiso fringing that calm sea, attracts general attention. The highway where the commerce of eastern Asia *must* land, absorbs thinking minds. The *Emporium of the Indies*, where the products of the Orient are destined to enter, will be built upon our shores. The building of a large commercial city on Puget Sound is simply a question of time and circumstances. "I can only add that the foundation of the great commercial emporium of the Pacific has not yet been laid. The site of that city is now occupied by a small village, the lands of husbandmen, or the primeval forest; but as sure as commerce is controlled by fixed laws, as sure as the world is struggling to control the trade of eastern Asia, as sure as cause produces effect, the foundation of

that city must and will be laid upon the shores of Puget Sound. The nation is already awaking to the coming greatness of the far North West, and beginning to realize the importance of our position in the pathway of universal commerce. The grand march of humanity is still onward and westward. Starting from the plains of Central Asia in primeval times, man has kept step with the music of the ages in his march toward the setting sun. On and on, across deserts and seas, mountains and oceans, as if following the finger of destiny, he moves with the certainty of fate. Generations perish, but posterity takes up the march; six thousand years have been deposited in the vault of eternity, and yet the tide of life moves on, subduing nature, building cities, cultivating the arts, growing in intellect, worshipping God. Thus it has been, is, and will be until the tide of human life sweeps across our continent, and pausing upon the shores of the Pacific, reaches forth to the land of its childhood rising in view in the ever distant west. I thank my God that my home is in the line of this great movement of the race, and that untold myriads will linger upon our shores, attracted by the varied resources, magnificent climate, and commercial facilities of Washington Territory."—*Garfield*.

In view of the inducements latent in Washington Territory, its central position, spangled havens, thermal winds, genial climate, vernal showers, green fields and smiling gardens, inexhaustible coal fields, minerals, forests primeval, facilities for lumbering and shipbuilding, advantages for developing the enormous fisheries on the northwest coast and the valuable fur trade in Alaska and Siberia, and the superior convenience for carrying on the commerce to and from Asia and across the continent, what fields are here open to the young men of our country. May we not expect many to join us in developing our wealth; may we not also look for solid men of capital, with their families, from the east, following the course of empire to our coast to locate homes, nurture commerce, plant civilization, build up society and social amenities among our pioneers in the sunset land. From the cultivated nations of Europe—the sunny climes of the Latins, La Belle France, Germany, England, Ireland and Wales; from the bracing regions of British America; from the craggy island of Newfoundland; from the foggy peninsula of Nova Scotia; from the rock-bound shores of New England; from the bleak sands of the northern lakes; from the rich

prairies of the west ; from the broad savannas of the south ; from the Rocky Mountains and the Pacific slope —

"Come along, come along, don't be alarmed,
For Uncle Sam is rich enough to give us all a farm."

TRIUMPHS OF THE FISHERMEN.

In every country where the fisheries have been economically prosecuted, they have been successful nurseries of discovery, commerce, civilization, and human progress. The live emulation which that industry infuses in the youthful breast has led to heroic achievements; the page of history is spangled with valorous deeds of the fishermen; the Apostles, who abandoned their nets to share the toils and companionship of Jesus, were nurtured in the fishing craft. Ernest Rennan pays a lofty tribute to the fishermen in the "lake region." He remarks: "Very successful fisheries were prosecuted on the lake of Tiberius, especially at Bethsaida and Capernaum, which had provided a certain competency. The families of the fishermen formed a pleasant and peaceful society, strengthened by numerous bonds of relationship through all the lake regions; their leisure gave larger liberty and scope to their imagination; their manners were peaceful and they had something of refinement. They seemed somewhat analagous to the better portions of the population in the Lebanon, but with the capability of producing great men. Jesus there found his real family, he installed himself among them as one of themselves; Capernaum became his own city; in the midst of their little circle which adored him, he forgot his sceptical brothers—ungrateful Nazareth and its mocking credulity. . . . Jesus, who was fond of playing upon words, occasionally said that he would make them fishers of men."

The countries of Europe bordering on the Mediterranean fostered the fisheries. The republic of Venice extended great facilities to that industry, and her merchants for centuries monopolized the rich trade with the east. Genoa afforded but little scope at home to her fishermen; they went abroad to operate among the isles of Greece, "where burning Sappho loved and sung." They also extended their voyages to the Black Sea, and acquired a heavy prestige. At one period they controlled the navigation of the Bosphorus, and collected tribute of foreign vessels passing through those waters. The countries

of northwest Europe have also given much encouragement to the fisheries. Holland has been earnest in developing the herring fishery; for centuries her fishermen held a monopoly of that profitable industry; a proverb still prevails among the old sailors that "Amsterdam is built on herring bones." The duties of a shipmaster are now well defined; a trim clipper, combining all the modern improvements, awaits his orders, well furnished cabins afford every comfort, the spar, rope and sailmaker have given her wings to walk the waters, a merchant furnishes a cargo which the stevedore stows secure, the shipping master contracts with the ship's company and puts it on board, a broker prepares the papers and clears the vessel in the custom-house; all being ready the "lord paramount" enters the ship bringing an approved time-piece, almanac, navigator, and sailing directions over every sea. A powerful tug-boat tows the vessel to sea under the guidance of a branch pilot; having got an offing the favored man of destiny takes his metal silver arched sextant, gets a sight of the sun, regulates his chronometer, gives the course to the steersman by the recently-touched compass, notes the barometer and snuffs the gale afar off; his spacious charts, perfect in all the discoveries of modern hydrography, point out with precision the islands, rocks and shoals in his path; thus armed and equipped he pursues the even tenor of his way. If he sights strange shores, lights, magnified with illuminating apparatus, cheer him on his voyage, and if perchance he spys a sail, he sends and receives friendly greetings by means of recognized signals. On approaching his destined port he sets the "Jack," which attracts the watchful pilot who skilfully conducts the argosy into port and moors it safely.

Ancient Mariners. In early ages "a life on the mountain wave" was not so pleasant; the vessels were small, rudely built, and scantily furnished; the compass, quadrant or chronometer were not in use; the holy pigeons and the heavenly bodies were the guides on the trackless sea. Seamen were daring, and placed much confidence in lucky stars and supernatural agency; they launched out on the waters and made rich discoveries, visited strange lands, explored seas, and established trade with the denizens of other lands. Through the researches of the late Henry Wheaton, the Icelandic manuscripts unfold the early discoveries of the European fishermen in Iceland, Greenland, Labrador and Gaspe in the ninth century. He

remarks: "Suppose these discoveries to be authentic, they could hardly have escaped the attention of Columbus, who himself had navigated the Arctic seas, but whose mind dwelt with such intense fondness upon his favorite idea of finding a passage to the East Indies across the western ocean, that he might have neglected these indications of another continent in the direction pursued by earlier adventurers. . . . At all events there is not the slightest reason to believe that the illustrious Genoese was acquainted with the discovery of North America by the Northmen before his own time, however well authenticated that fact now appears to be by the Icelandic records. The colony established, by them probably perished in the same manner as the ancient establishments at Greenland. Some faint traces of its existence may be found in the relations of the Jesuit missionaries respecting a native tribe in the district of Gaspé, near the mouth of the river St. Lawrence, who are said to have attained a degree of civilization, to have worshipped the sun and observed the position of the stars; they also revered the symbol of the cross before the arrival of the French missionaries, which, according to their traditions, had been taught them by a venerable person who cured, by this means, a terrible epidemic that once raged among them."

The invention and use of the mariner's compass has developed important discoveries and explorations. In 1797, Cabot, in a British vessel, made a direct voyage to Newfoundland, from which he brought a good return in fish, oil and fur. This voyage created an intense excitement in Europe, and stimulated the merchants to maritime adventure in the new world.

The lone, barren island of Newfoundland, indented with bays, coves and arms, affords congenial resort for fish. To this El Dorado the adventurous spirits of the old world directed their best energies. On this sterile island the first European settlement in America was planted; the first church on our continent was built on this rock, and the first white child put in an appearance there. Bacon directed the first flash of his genius to this colony. Baltimore laid down here the foundation of universal brotherhood; the first civil court from which went forth the imperishable safeguards of the great charter was located on this "lone barren isle." About one hundred years before the landing of the Pilgrims at Plymouth, the city of St. Johns was founded, and became the entrepot of the period. One thousand

vessels fished and traded around the island, and procured valuable furs a century before any portion of New England was settled.

The resources so abundant around Newfoundland have been earnestly prosecuted. During the war with the American colonies, the British government nearly ruined the fisheries by making continual drafts on the fishermen. The Royal Navy obtained its best seamen among them, and they were cruelly impressed, entailing much hardship and distress among the community. The restoration of peace was gladly hailed by the "hardy toilers by the sea," and they readily embarked again in developing the fisheries. Hundreds of traders from Europe located along the coast, immense capital was invested, and healthy reaction and general progress was visible. The revolution in France and the wars incident to that fearful commotion, created a great demand for fish. In 1814, one million two hundred thousand quintals of dry fish, with salmon, oil and peltry amounting to \$12,000,000, left the island, the merchants accumulating princely fortunes. The business is still successfully prosecuted, the past season having been prolific of great success. The products of the seas will approach \$8,000,000, which, for a population under 150,000, speaks volumes.

The French fishermen operated early in American waters. In 1534 Jacques Cartier explored the Gulf of St. Lawrence, and stimulated the French Government to inaugurate a system of emigration to America on a broad scale. The most available shores around the Gulf of St. Lawrence soon resounded to the hum of the fishermen; every bay was thronged with boats and vessels—immense profits were annually realized, and the French shipowners were numbered among the merchant princes in Europe. "Accounts, which are considered authentic, show that they employed nearly 600 vessels, and upwards of 27,000 men, and that the annual produce was almost 1,500,000 quintals of fish, of the value of more than \$4,500,000."—*Sabine*.

Cape Breton Island formed the principal base in prosecuting the fisheries; there they built the city of Louisburg, and fortified it with 200 guns. Commerce and trade flourished, palaces, churches, nunneries and fine residences were numerous, which were tastefully adorned by surrounding gardens. "This city was named in honor of the King; twenty-five years and 80,000,000 of livres were required to complete it. Its walls were

built of bricks brought from France. More than two hundred pieces of cannon were mounted to defend it. So great was its strength that it was called the Dunkirk of America. It had nunneries and palaces, terraces and gardens. That such a city rose upon a lone desolate isle in the infancy of American colonization, appears incredible. Explanation is alone found in the fishing enthusiasm of the period."—*Sabine*.

In 1602 a British fleet, under Gosnald, visited New England and explored the waters fringing that coast. Cape Cod harbor appears to have been the base of operation; different varieties of fish were found in great numbers, and the mainland furnished valuable furs, which the Indians bartered with the strangers. The wealth latent in and around Massachusetts was duly reported in Britain, which raised an excitement and stimulated the most adventurous spirits to visit our waters; among the more ardent came the redoubtable Capt. John Smith, a man very generally known among the merchants of Europe. In 1614 he made a voyage to our shores, explored the coast bordering on Massachusetts Bay, and drove a successful trade with the natives, and caught a fare of cod. On his return to England he parceled out the products of his voyage to the elite of the kingdom; he also circulated wonderful reports touching the fabulous wealth latent in New England, which stirred up the people to a degree of frenzy. Merchants invested largely in the American fisheries; officers in the army, navy and civil service, in numbers, resigned positions of emolument; noblemen abandoned their estates; judges doffed the ermine; clergymen their cassocks, and joined Smith in an enterprise to Massachusetts for fish, oil and peltry. Hundreds of vessels came, and the products of the land and sea were earnestly sought. The germ of our commerce was then and there "sown in weakness."

Nor was the excitement confined exclusively to the British isles; it raged violently on the continent and affected communities. In Holland it attacked even the staid Puritans. They had for years witnessed the successful development of the herring fishery at Leyden, and they now determined to take a hand in the more excellent fish in America. In this frame of mind they sent a delegation to England to the British King imploring His Majesty for the privilege to settle in America and develop the fisheries on that coast. The King deemed the request a favorable excuse to get clear of a turbulent element, and he gave

his consent readily, exclaiming, "So God have my soul, 'tis an honest trade, 'twas the Apostle's own calling." Having thus obtained the Royal sanction, the Puritans left the old for the new world. After much tribulation they came, they saw, they conquered,—they made Plymouth Rock the corner stone of the great republic, and the result is before the world.

The British government has always been partial to the "home merchants," even at the expense of its colonial subjects. The heroic pioneers who planted the first settlements in America were seldom cared for, their best interests having often been sacrificed in behalf of the home pets. In the early colonization of Newfoundland the shore boat fisheries were destroyed in the belief that such destruction would help the home fleet on the banks. This ruin spread broadcast for several years, entailing much hardship and distress among the hardy islanders.

The British government extended little protection to the New England settlers. In their wars with the neighboring Indian tribes they relied wholly on their own resources; they "feared God and kept their powder dry," and maintained wholesome government at every hazard. The French Acadians on the borders were fast increasing in prosperity and power,—an "irrepressible conflict" existed between the races, and disputes were common, often ending in sanguinary broils. The heroic fishermen of Massachusetts determined to clean their old enemies out of American waters entirely, and the capture of Louisburg was planned. In 1745 the merchants of New England combined into a league for a final struggle for supremacy. They furnished vessels and the sinews of war. The fishermen manned the fleet; mechanics, lumbermen and farmers joined the ranks. The expedition was conducted by Wm. Peperell, a fisherman from Maine. "A more undisciplined body of men never embarked to attempt the reduction of a walled city. The squadron commanded by Warren, and ordered to co-operate with Peperell, arrived in time to share in the perils and horrors of the siege. The colonial fleet and the ships of the royal navy kept up a close blockade. The colonists on shore, without a regular encampment, lodged in huts built of turf and bushes; with straps across their shoulders they dragged cannon in sledges over morasses impassable with wheels. Making jest of military subordination they fired at marks, fished and fowled, raced and wrestled, and chased after the balls shot from the

French guns. Badly sheltered, and exhausted by toil in mud and water and exposure in a cold and foggy climate, fifteen hundred became sick and unfit for duty. Still the siege was conducted with surpassing energy, with some skill and courage seldom equalled; nine thousand cannon balls were discharged by the assailants. The French commander submitted on the forty-ninth day of the investment. The victors entered the Dunkirk of the western world amazed at their own achievements."—*Sabine*.

Notwithstanding that the British government restored Louisburg afterwards to the French, in exchange for some islands in the Indies, yet the blow was struck which opened the Gulf of St. Lawrence to the Saxon. The British nation gave little credit to the colonial fishermen for their daring exploits; intense jealousy prevailed, instigated by the wonderful strides which the New England colonists were making in developing the fisheries and commerce. This feeling finds an illustration in a writer of that period: "New England," he said, "is the most dangerous plantation to this kingdom in America; none are so apt at shipbuilding or so qualified for the nurturing of seamen, by reason of their cod and mackerel fisheries. In my opinion there is nothing more prejudicial and in prospect more dangerous to my mother country than the increase of ships in her colonies."

The Imperial Parliament drank deep of this poison and took the fatal steps which severed valuable branches from the parent trunk; in 1773 that body passed a law for the ruin of the fisheries in New England; high prohibitory duties were levied on the products of the foreign colonies in the West Indies landing in New England. In executing those measures the revenue officers were subjected to abuse, and in some cases, to bodily chastisement. The people were earnest in stirring up a warm opposition to this oppressive statute. "Cheap sweetening" became the password to fire the northern heart,—a text which James Otis expounded with telling effect. In all the commotions through which our country has since passed—the wars with the mother country and the awful rebellion in the south—the heroic deeds of the fishermen shine in historic brass. The recent "cutting out" of the "Horton" demonstrates the daring valor of the fisherman.

Fishermen as a class constitute less fish than is generally sup-

posed; they seldom touch the coarse-grained portions,—the jawl, lip, tongue, sound and nape constitute their fish diet. Learned physiologists assert that sweet fresh fish, properly cooked, affords the most desirable brain food and healthy nourishment for intellectual development; this theory accounts in part for the success among fishermen. As a reformatory school the fishing craft affords genial scope to the most ungovernable youth; the keen desire to be high line, and the burning ambition to lead in sailing, renders this calling the most acceptable. Many a runaway boy has risen to honorable positions of trust through this live industry. Poor boys engage in it at an early age. The season embraces eight months, which is devoted to fitting, fishing and curing; the few inclement months afford an opportunity for acquiring the rudiments of education in the poor boy's college—the free schools. From such humble beginnings some have risen to commercial renown; the Pattens, Cushings, Coffins, Bacons, Howes, Fosters, Bakers, Nickersons, Ryders, Lombards, Westons, Holmes', Baxters, Hallets, Sturgis', Grinnells, and others among our merchant princes now basking in wealth, have won their earliest laurels at the cod-line.

Legislation friendly to the development of our fisheries is now earnestly demanded and appeals warmly to our government. The depressed condition of our shipping unites in this call. Commendable efforts have been put forth to stimulate shipbuilding. We submit a few practical suggestions to the "assembled wisdom" of our country touching the needed measures most likely to stimulate our fisheries, and the development of our commerce:

First—A governmental subsidy, payable on the products of the sea.

Second—The immediate incorporation of British America with our country.

Lastly—The creation of a department in our government supervising our fisheries and commerce.

The maritime nations of northern Europe have, from time immemorial, encouraged the fisheries—a policy which has been crowned with happy success. Denmark pays large sums annually for developing the fisheries around Iceland and Greenland; that industry has attained great proportions, and is earnestly

prosecuted with good results. The British Parliament appropriated direct subsidies to the fishing vessels from the United Kingdom employed in the American fisheries; indirect facilities are also extended to the business; the capital invested is free from taxation, and the outfits are obtained in bond, saving considerable to those engaged in the business.

The French government have, for centuries, given the greatest premium on fish. From the interesting report on the American Fisheries, by Hon. Lorenzo Sabine, and printed by the Secretary of the Treasury in 1853, we learn that the National Assembly of France has passed a law of the following tenure relative to the great maritime fisheries, June 24th, and July 9th and 22d, 1861:

CHAP. I. Cod Fishery. From the 1st of Jan., 1852, to the 30th of June, 1861, the bounty granted for the encouragement of the cod-fishery will be as follows:

First—Bounty on outfit. Fifty francs per man of the crew employed in the fishery, either on the coast of Newfoundland, at St. Peter's and Miquelon, or on the Grand Bank, and possessing a drying place. Fifty francs per man of the crew employed in the Iceland fishery, without a drying place. Thirty francs per man of the crew employed in the fishery on the Grand Bank of Newfoundland, and without a drying place. Fifteen francs per man of the crew employed in the Dogger Bank fishery.

Second—Bounty on the produce of the fishery. Twenty francs per metric quintal of dry codfish, the produce of the French fishery, to be shipped either direct from the fishing establishments, or from the ports of France, for the markets of the French colonies of America and India, or for the settlement on the west coast of Africa and other transatlantic countries. *Provided* always, That the fish be landed at a port where there is a French Consul. Sixteen francs per metric quintal of dry codfish, the produce of the French fishery, shipped either direct from the fishing settlements, or from the ports of France, and destined for the countries of Europe and the foreign States on the shores of the Mediterranean, Sardinia and Algeria being excepted. Sixteen francs per metric quintal of dry codfish, the produce of the French fishery, that may be imported into the French colonies of America and India, and other transatlantic countries where such fish are exported from the ports of France without having been landed. Twelve francs per metric quintal of dry codfish, the produce of the French fishery, shipped for Sardinia and Algeria, either direct from the fishing settlements or from the ports of France. Twenty francs per metric* quintal of the hard roe of codfish, the produce of the French fishery, brought into France by their fishing vessels.

Metric quintal — 220½ lbs.

The Dominion of Canada pays liberal subsidies in developing the fisheries, and the business is earnestly prosecuted with apparent success. The completion of the railroad to Halifax, and the prospective benefit from the "Treaty of Washington," will stimulate the colonial fisheries and rear a grand competitor.

The fishing industry engaged the most earnest attention of our early statesmen; the war of Independence sprung out of measures directly affecting that business. The restoration of peace, the adoption of the Federal Constitution, and the wheels of government being in motion, the time was opportune for inaugurating measures of relief to the fishermen. In 1790, President Washington, in his annual message, submitted to Congress, that "The navigation and the fisheries of the United States are objects too interesting not to inspire a disposition to promote them by all means which shall appear to us consistent with their natural progress and permanent prosperity." Congress acted on that wise policy and appropriated a specific subsidy, graduated to the capacity of the vessels employed in the fisheries. In 1802, President Jefferson urged upon Congress the propriety of fostering our fisheries "as sources of navigation and the nurture of man." Here we behold the master mind of the period leading in the path of progress, "the man of great ideas," who, in the Declaration of Independence, indicted the British King for open violation of English laws; the political economist, who, in the very first year of our national existence, equipped Ledyard and sent that famous traveler to the northwest coast of our continent for the purpose of finding the Columbia river and its facilities for commerce; the far-seeing patriot under whose auspices Lewis and Clark crossed to the Pacific to locate a national route; the philosophic brain which stimulated Astor to plant an American colony in the wilds of Oregon to develop the fur trade among the Indian tribes in those regions, and to inaugurate commercial intercourse with the people of eastern Asia; this live statesman now prevails on Congress to weld the connecting link in the chain of American destiny, by subsidizing the fisheries as the sure nursery of a mighty commerce. The committee to whom this matter was referred, submitted that "There was too much reason to believe that both the whaling and codfisheries had been for some time on the decline. As a means to reanimate them they recommend that vessels actually employed in the fisheries should

not be subjected to the payment of tonnage duty; that fishermen should be exempt from the charge of hospital money; and that the bounty under existing laws should be paid in cases of shipwreck." This recommendation was adopted, and the fishing industry prospered for a season. The embargo proved disastrous, much distress prevailed; the war with England completed the ruin of the business; many vessels were captured or destroyed, which inflicted untold hardships on the fishing communities. After the proclamation of peace Congress came to the rescue, high duties were levied on all imported fish, and healthy development followed. In 1819 Congress increased the bounty; vessels under thirty tons obtained three dollars and a half, larger vessels four dollars per ton; no vessel received over three hundred and sixty dollars in one season. The subsidy thus provided was subject to conditions, as to men and the time devoted to the fisheries. The premium paid stimulated commerce along the eastern coast; swift vessels have been launched; oceans and seas have been explored; islands and reefs have been discovered; the monsters of the deep have been captured; the sails of our fleets have whitened every bay; the bounds of civilization have been extended, and the "Star Spangled Banner" has waved in the uttermost parts of the earth. The success which has crowned the governmental bounty exceeded the most sanguine expectations of its early advocates. This wonderful prosperity excited the jealousy and animosity of the agricultural sections in the south and west, and a virulent crusade was fomented against it. On the 20th of Feb., 1852, the following circular from the Treasury Department was issued to the Collectors of Customs:

"For the purpose of producing uniformity in the requirements of proof by Collectors who are charged with the allowance of bounty on the tonnage of vessels employed in the codfisheries, it has been deemed advisable to embody the existing regulations. . . . No fishing vessel of which the fishermen are compensated for their services on board by wages is entitled to bounty. . . . No fishing vessel is entitled to the bounty unless it is proved that the master and three-fourths of her crew are citizens of the United States. . . . From the original act of 1792, changing the drawback on dried fish exported, to bounty on tonnage employed in the codfisheries, it has been held that to entitle any vessel to bounty, she must have

been employed exclusively in catching codfish for the purpose of being dried. No part of a voyage, in which halibut, mackerel, or any other fish are taken as well as cod, can be reckoned as a portion of the time required by law; the fish must be regarded as one of mixed fishery, which cannot be taken into computation of the time required for bounty. But the taking of mackerel by any vessel under codfish license is regarded as a violation of the license laws; such illegal fishery during any season will forfeit all claim to bounty for that season.

Vessels employed in taking fish for sale in a fresh condition, as well as fish to be preserved by pickling, are not within the bounty laws, and no voyage in which such fisheries are pursued can be legally computed as any part of the period required for the allowance of bounty.

This extinguisher was carried out to the letter by the revenue agents, and operated to close the subsidy to many fishermen. Secretary Cobb drove the last nail in the coffin when he issued his constructions to his subordinates. No matter how just the claim, the master of a vessel could not obtain the fishing bounty except through open perjury. Thus, no honest man would, under the circumstances, apply for it, and the humble nursery of our commerce "died of a rose in aromatic pain."

In view of the premium which commercial nations are annually paying to their fishermen, and the depressed condition of our shipping interest, Congress should now step to the verge of its power in subsidizing the American fisheries on a scale commensurate with their extent and value.

All vessels participating in our fisheries should be built, rigged and equipped out of the products of our country; to carry a specified number of boys as a part of the crew, and to devote six months in fitting, fishing, curing and marketing fish; vessels thus employed to receive governmental subsidy on the produce of the salt fisheries, one cent per pound on dry, and one half cent per pound on pickled fish. This bounty falls much lower than that annually paid by the French government to its fishermen.

It has been shown that the "Yankees" captured Louisburg and opened the Gulf of St. Lawrence and the adjacent fishing grounds to the Saxons. Through a bloody baptism they won their title to those regions; conscious of their rights, they and their descendents have resorted to the provincial waters in quest

of treasures latent there. The people domiciled on the shores of the maritime colonies have realized substantial benefits, and hail our fishermen as "ministering angels." In our boyhood we witnessed many acts of kindness from the American fishermen to our country people on Prince Edward Island. We know that the generosity of the "Yankees" have won the grateful appreciation of the inhabitants, and that a majority are anxious for immediate union with the United States. The hardy toilers in Newfoundland are also knocking for admission; neither threats or blandishments sufficed to rope them in with the Canadians. From Nova Scotia we have the "glad tidings" that the heroic fishermen along that coast are most earnest for "a closer walk" with our republic. The railroad to Halifax will bind the union and consummate the nuptials. New Brunswick, sandwiched in, will "follow the lead" of her more advanced neighbors, and, like ripe fruit, will on some fine morning fall of its own weight into Uncle Samuel's basket. Mantibo has been heard from; Bally and his compatriots have given some striking yearnings for a change. British Columbia has spoken in plain language to her Majesty, Victoria; the people of that romantic colony, with wonderful unanimity, petitioned President Grant to have mercy upon them, and to incorporate them with the universal Yankee nation. Thus we observe the commercial interests along the entire seaboard of the "Dominion" seeking closer relation, and "a more perfect union" with our country.

The people of Canada will soon see the great benefits to be realized from an early incorporation into our family of States. The great Northwest is fast developing in material wealth; that prolific section depends mainly on the St. Lawrence as the natural channel to the markets of northwestern Europe. The early completion of the North Pacific Railroad through a fertile belt of land and terminating at Lake Superior, will stimulate industry. The Welland Canal affords a shallow channel for transporting the vast products of the farm, forest and the sea. Internal improvements commensurate with the requirements of commerce must be inaugurated; spacious canals are demanded, which call for enormous expenditures; hundreds of millions must be forthcoming to consummate those great measures so beneficial to our country in general, and particularly to the Northwest coast.

Her Majesty's subjects in British America have made commendable advancement in material and intellectual progress. They have been nurtured in the principles of the great charter of freedom, and are well qualified to maintain liberal self-government. They have made healthy strides in developing industry and mechanism; they will come into our Union on the broad platform of equal rights. The Canadas and the maritime colonies will enter as *Sovereign States*, reserving to their respective legislatures the control of local affairs. Manitoba and British Columbia should be admitted as *Territories*, under the same restraints and subject to the same laws regulating affairs in Wyoming, Idaho and other territories.

This policy offers the best method for settling the "Horton" case, and the surest guarantee for the future maintenance of harmony and good will. Healthy progress will follow; peaceful commerce will thrive; the fishermen will compete for the treasures of the deep under the protecting eagle of the *Union flag*, with none to molest them; shipbuilding will be stimulated under "*the new dispensation*," mechanical labor will be in active demand, and our people will rejoice "in the good time coming." Our government should lead in this measure. President Grant should earnestly recommend this theme in his forthcoming message. Congress may take timely heed and pass liberal enabling acts inviting the British colonists into the great national household. Every effort should be put forth tending to unite the great Anglo Saxon race in the bonds of political unity and fraternal brotherhood. As a native of British America, we do hope to see that vast domain united to this great Republic. We hail the healthy progress annually made to this end, and will rejoice in the early reunion as a step in the right direction.

The acquisition of Alaska has added much to our scanty fishing grounds. The prospective incorporation of the maritime provinces of British America with our country will enlarge our facilities. Such broad banks, teeming with spontaneous treasures, afford an inexhaustible nursery for rearing a grand commerce. Friendly legislation will quicken the development of this prolific industry. *Political economists can devise no surer policy for reviving our shipbuilding than by extending material encouragement to our fisheries.* A specific department of our government should be created to supervise this branch of national industry. All vessels employed in the whaling, walrus, sealing or

salt fishing, should be furnished with blank log-books and charts *gratis*. Discoveries of fishing grounds or other useful information touching the fisheries, should be freely disseminated in annual reports among our fishermen. It is time that organic measures should be inaugurated. Congress should move earnestly in the matter, to the end that the fisheries of our country may be properly developed.

CONCLUSION.

The humble suggestions herein submitted are founded on observations noted in different countries during the past forty years. We commend them to the careful attention of thinking minds, in the hope that a more liberal policy may be adopted in behalf of our fishing industry, our depressed shipping in general, and the Northwest Coast in particular.

"Westward the course of Empire takes its way,
The first four acts already past;
The fifth shall crown the drama of the day,
Time's noblest offspring is the last."

POSTSCRIPT.

In describing the northwest coast and the shores of Siberia, we have undertaken "a big thing;" 100,000 miles of shore line laved with the warm stream from Japan, and teeming with visible and invisible treasures, forms a large subject to be demonstrated in a pamphlet of one hundred pages. During our voyaging on the North Pacific we have visited many places and witnessed some of the resources herein set forth. In confirmation of our observations we have quoted well known authorities: Prof. Davidson, Superintendent of the Pacific Coast Survey, Generals Thomas and Davis, of the United States army, have been cited extensively.

In demonstrating Puget Sound and its beautiful scenery and climate, we have drawn much on Wilkes, Davidson, Stevens, Flanders, Evans, Garfield and other experts. In behalf of the heroic fishermen of ancient and modern times, we have mainly relied on Hona. Henry Wheaton and Lorenzo Sabine. We are cognizant of many defects which we hope to amend. We earnestly invite the co-operation of intelligent fishermen to the end, that this work may contribute to the proper development of our fisheries.

J. L. McDONALD.

GLOUCESTER, MASS., Nov. 3, 1871.

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